The Croonian Lectures
ON
CEREBRAL LOCALISATION.

Delivered before the Royal College of Physicians of London,

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LECTURE I.
INTRODUCTORY.

MR. PRESIDENT AND GENTLEMEN,—While highly appreciating the distinguished honour of being appointed Croonian Lecturer of the College of Physicians, I must confess to having undertaken the onerous duties of the office with considerable hesitation and trepidation, for, though the subject which I have chosen is one to which I have devoted a good deal of attention, and which, in one of its aspects—namely, the Localisation of Cerebral Disease—I have already had the honour of discussing before you as Gulstonian Lecturer, yet, considering the enormous amount of work that has been done in this department in recent years, and the numerous problems which still remain unsolved, I have felt that, with my other duties, time and strength would scarcely permit me to do justice to my subject. I could not feel satisfied with merely repeating the views which I have elsewhere, and at various times, expressed on this subject, and which, to many of you at least, are sufficiently well known; therefore it seemed necessary that I should, for the purpose of these lectures, undertake new investigations, in order to throw light, if possible, upon some of the points which are still in dispute. But to compress into practically a few months of otherwise fully occupied time what might well be the undivided labour of a long period has proved a difficult task, and I have fallen far short of what I had hoped to accomplish, though I trust that some of the results at which I have been able to arrive may contribute towards a solution of some of the vexed questions. I purpose in these lectures to sketch the evolution of the doctrine of cerebral localisation, to indicate the principal data on which it is based, and to discuss, in the light of the most recent investigations, the evidence for and against the existence of specific centres, and their exact position in the cerebral cortex.

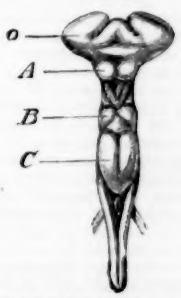
Before considering the facts bearing directly upon the specific localisation of function in the cerebral cortex, I think it advisable—nay, even necessary—to consider the effects of ablation of the cerebral hemispheres in different classes of animals. A due consideration of these phenomena affords, I think, a satisfactory explanation of the chief objections which have been urged against localisation in general, and, at the same time, also renders unnecessary certain hypotheses as to the functional substitution of one part of the cortex by another, which have been—and, in my opinion, rightly—regarded by the opponents of localisation as altogether subversive of its fundamental principles. Recent researches on the effects of the removal of the cerebral hemispheres by improved methods have necessitated some important modifications of the doctrines which, up to quite a recent date, have been generally entertained on the subject.

Let us begin with fishes. When in osseous fishes the ganglia (which correspond morphologically to the cerebral hemispheres of the vertebrates) are entirely removed, there is little, if anything, to distinguish them from perfectly normal animals. They maintain their natural attitude, and use their tails and fins in swimming with the same vigour and precision as before. It has generally been said that brainless fishes possess no spontaneity, but seem as if impelled by some irresistible impulse (occasioned by the impressions communicated to the surface of their bodies by the water in which they are sustained) to swim until they are exhausted by pure neuro-muscular fatigue. In their course, however, as was shown by Vulpian, they do not blindly rush against obstacles, but turn to the right or left, according to circumstances, as if still possessed of some sense of vision. Vulpian says:[1] "In fact, when the cerebral hemispheres have been removed from a fish which does not readily succumb to this kind of operation (a roach, for example), not only may it be urged to move by bringing an object before its eyes, but I have proved that it avoids obstacles; for, by placing a stick to the right or left, a few centimetres from its eye, I have frequently caused the fish to turn in the opposite direction."

Steiner[2] does not admit the absence of spontaneity in fishes so operated upon, for he has seen that they occasionally remain at the bottom, at other times balance themselves at various heights in the water, and now and then swim about freely, without any obvious alteration in the conditions by which they are surrounded. He has also shown, and in this he has been confirmed by Vulpian,[3] that they not only see, but are able to find, their food. If worms be thrown into the water in which they are swimming, they immediately pounce upon them. If a piece of string similar in size to a worm be thrown in, they are able to detect the difference, and either disregard it entirely, or drop it after having seized it. Not only do they seize their food, but they discriminate between different kinds, selecting some and rejecting others. They even to some extent distinguish colours, for when one red and a few white wafers are thrown into the water, the fish almost invariably selects the red in preference to the white.

From these facts it would appear that the fish without cerebral hemispheres can see, distinguish colours to some extent, catch its prey, discriminate between different kinds of food, direct its movements with precision, and, in fact,

FIG. 1.



Brain of a dog-fish (after Steiner). A, Cerebral hemisphere. B, Optic lobe. C, Cerebellum. O, Olfactory lobe.

behave to all appearance like a normal animal. The only difference observed by Steiner was that brainless fishes appeared more impulsive and less cautious than those which had not been operated upon. What has been said above applies, however, only to Teleosteous fishes. Quite different results appear to follow removal of the cerebral hemispheres in Elasmobranchs. Thus the dog-fish, according to Steiner,[4] after this operation is entirely deprived of spontaneity, and is quite unable to find the food (sardines) by which it is surrounded. The difference between the two orders of fishes is, however, more apparent than real, for the dog-fish is guided mainly by its sense of smell, while the activity of the osseous fish is conditioned more especially by vision; hence, in the dog-fish, removal of the cerebral hemispheres, which are almost exclusively related to the sense of smell (Fig. 1, A), abolishes all the reactions conditioned by this sense; while in the osseous fish, the primary visual centres (optic lobes), being intact, the ordinary modes of activity, which are conditioned mainly by the eyes, continue to all appearance unmodified.

Frogs.—According to researches, more particularly of Goltz[5] and Steiner,[6] frogs deprived of their cerebral hemispheres behave, *cæteris paribus*, essentially like fishes similarly treated; they maintain their normal attitude, and resist all attempts to overthrow their equilibrium. If laid on their backs they will turn over and attempt to regain their ordinary position. If the basis of support on which

[1] Système Nerveux, p. 669.

[2] Die Functionen des Centralnervensystems. Zweite Abtheilung: Die Fische. 1888. [3] Comptes Rendus, tomes cii. et ciii., 1886.
[4] Op. cit. [5] Functionen der Nervencentren des Frosches, 1869.
[6] Physiologie des Froschhirns, 1885.

they rest is tilted in any direction, they will clamber up, forwards or backwards, until they gain a position of stability. Their powers of locomotion are retained, and their limbs are coördinated with precision. If a foot be pinched, or any irritation applied to the posterior part of the body, they will hop away; thrown into the water, they will swim, and continue swimming until they have reached the side of the vessel, up which, if possible, they will clamber and rest in peace. It would, in fact, be difficult, so far as their movements and response to peripheral stimuli are concerned, to distinguish between a normal and a brainless frog. If the back be gently stroked, the frog will answer uniformly with a croak, as if of pleasure or enjoyment. If the animal be put in a vessel containing water, the temperature of which is gradually raised, it will jump out as soon as the bath becomes uncomfortably hot. If placed at the bottom of a pail of water, it will ascend to the surface to breathe. If the vessel be inverted over a pneumatic trough and filled with water, sustained by barometric pressure, the frog will ascend to the top as before, but not finding there the oxygen necessary to satisfy its respiratory craving, it will work its way downwards, and ultimately succeed in making its escape out of the vessel on to the free surface of the trough. Like the fish, the brainless frog undoubtedly possesses some form of vision; it does not, when urged to move, rush blindly against an obstacle, but will leap over it, or turn to the right or left, or otherwise avoid it. In all these respects a brainless frog behaves like a normal one, but one noteworthy difference has been signalised by most observers—namely, that the brainless frog, unless disturbed by some form of peripheral stimulus, will remain for ever quiet on the same spot, until, in fact, it becomes dried up and converted into a mummy. All spontaneity—that is, varied activity under apparently the same external conditions—appears to be annihilated; its past experience has been blotted out, and it views with indifference signs and threats which would formerly have made it flee. It is also generally stated that the brainless frog has lost its instincts of self-preservation, and either feels no hunger or possesses no power to satisfy its physical necessities, so that it dies in the midst of plenty. The more recent experiments, however, of Schrader[7] would seem to show that removal of the hemispheres deprives the frog neither of spontaneity, nor of special instincts, nor of the ability to feed itself; for he has observed brainless frogs, which have been kept alive for long periods, apparently "spontaneously" jump from the pier of a galvanometer, absolutely free from all tendency to vibration, alternate between land and water in the aquarium, crawl under stones, or bury themselves in the earth at the beginning of winter, and, when cautiously submerged under water, begin to swim exactly like normal frogs under the same conditions. These frogs also, after the period of nibernation, or in the summer, when their wounds were entirely healed, diligently caught the flies that were buzzing about in the vessels in which they were kept. It would appear, therefore, if these observations are correct, that the principal points of distinction between the brainless and the normal frog—namely, the absence of spontaneity and the power to feed itself, which are said to especially characterise the former—are no longer capable of being upheld, and that the brainless frog behaves precisely like the brainless fish above described.

Birds.—Let us now proceed to consider the effects of the removal of the cerebral hemispheres in birds, the next higher class of vertebrates, and more especially in pigeons. These have been rendered familiar to all by the classical researches of Flourens;[8] but though the picture he has drawn has been accepted as in the main correct, there have been, and there still are, some differences of opinion as to the facts, and more particularly as to their mode of interpretation. There is, however, no doubt that after this operation pigeons show no disturbance of station or locomotion. They maintain their normal attitude, and resist all attempts to overthrow their balance. Left to themselves, they appear, at first at least, to be plunged in profound sleep. From this condition they are easily aroused by a gentle push or pinch. When so urged, they march forwards, and, should they happen to step over the edge of the table on which they are placed, they will flap their wings and regain their base of support. Thrown into the air, they fly with all due precision and coördination. After each manifestation of activity so induced, they subside into their original state of repose. Occasionally, and apparently without any external stimulus, they may look up and yawn, shake themselves, dress their feathers with their beaks, move a few steps forwards or backwards, especially after defecation, and then settle down quietly, standing sometimes on one leg, sometimes on the other. They are altogether unable to feed themselves; but, if fed artificially, deglutition, digestion, and nutrition go on in a normal manner, and the animals may be kept alive for an indefinite period. Flourens was of opinion that the removal of the cerebral hemispheres annihilated all the senses, and rendered the animals blind, deaf, and devoid of smell, taste, and tactile sensibility. These conclusions were, however, disputed by Magendie, Bouillaud, Cuvier, and, in particular, by Longet[9] and Vulpian.[10] Longet found that the animals appeared to see, inasmuch as they would follow the movements of a flame held in front of their eyes at a sufficient distance to prevent all sensation of heat, and also when urged to move, occasionally at least, avoided obstacles in their path. Also they started at loud sounds, such as a pistol shot, made in their immediate vicinity; and from their movements and gestures appeared to feel impressions made upon the nerves of common sensation. As regards the senses of taste and smell, he found it impossible to arrive at any definite conclusions in animals of this order, and looked upon the statements of Flourens as not supported by convincing evidence. Longet believed that the removal of the cerebral hemispheres annihilated only perception proper, as distinct from crude or brute sensation, which had its centre in the mesencephalic ganglia.

The question as to the sense of sight in brainless pigeons has been much discussed,—that is, whether not mere impressionability to light exists, but as to whether the animals see, in the sense of being able to guide their movements in accordance with their retinal impressions. McKendrick[11] was of opinion that removal of the one cerebral hemisphere caused blindness in the opposite eye; and Jastrowitz,[12] from his own experiments, arrived at the same conclusion (on this see further below). The experiments of Blaschko,[13] under the direction of Munk, led to no very definite conclusions on this point, though it seemed as if the removal of the one hemisphere did not cause total blindness in the opposite eye. But Munk himself[14] has made it the subject of a considerable number of experiments. He found that in a certain number of pigeons, from which he had attempted to remove the cerebral hemispheres, vision was not entirely abolished, and the animals were able to avoid obstacles placed in their path. Careful investigations, however (post mortem), revealed the fact that in such cases the hemispheres had not been entirely destroyed, vision continuing to some extent in the eye opposite the hemisphere, the extirpation of which had not been absolutely complete. In those cases, however, in which not a trace of either hemisphere was allowed to remain, blindness, was complete and absolute. These animals, in their attitude and reaction to peripheral stimuli &c., exhibited the symptoms already described. The brightest light, however, caused no result beyond contraction of the pupil. The animals, when urged to move, ran against every obstacle which came in their way. When thrown into the air they flew with retracted head and half-raised trunk, outstretched legs, and dashed against obstacles, or fell bump on the ground and slid a considerable distance before coming to a standstill.

The phenomena described by Munk certainly indicate total blindness on the part of his pigeons, and he is of opinion that all those who have held that ablation of the cerebral hemispheres does not cause total blindness are in error, owing to the fact of the extirpation of the hemispheres not having been complete. Schrader, however,[15] describes the phenomena which he observed in two pigeons, from which, according to the post-mortem examination of von Recklinghausen, he had entirely removed every portion of the cerebral hemispheres. None of the cortex remained, but only minute remnants of the cut cerebral peduncles, which were, moreover, in a state of softening. These pigeons, within a few days after the operation, behaved in

[7] Physiologie des Froschgehirns: Pflüger's Archiv für Physiologie, 1887, Band xli. [8] Système Nerveux, 1842.

[9] Anatomie et Physiologie du Système Nerveux, 1842. [10] Op. cit.

[11] Observations and Experiments on the Corpora Striata and Cerebral Hemispheres of Pigeons: Royal Society, Edinburgh, 1873.

[12] Ueber die Bedeutung des Grosshirns: Archiv für Psychiatrie, 1876

[13] Das Sehcentrum bei Fröschen: Berlin, 1880.

[14] Über die centralen Organe für das Sehen und das Hören bei den Wirbelthieren: Sitzungsberichte d. Berlin Akademie d. Wissenschaften, July, 1883. [15] Physiologie des Vogelgehirns: Pflüger's Archiv Bd. lv.

such a manner as can only be explained by their still retaining some form of vision. For they not only avoided obstacles in their path, or in their flight, but appeared able to fly from one place and alight securely on another. These flights were mostly, if not entirely, caused by conditions calculated to induce a change of position,—such, for instance, as mounting them on a narrow basis of support, or putting them through balancing experiments. They never on any occasion spontaneously flew upwards from the ground.

With respect to the sense of hearing, Schrader verified in some of his animals the observations of Longet, that loud sounds, like the explosion of a percussion cap, caused a sudden start, but beyond this there were no signs of impressionability to auditory stimuli. If the results described by Schrader are correct,—and of this the description given by himself and von Recklinghausen seems to leave little room for doubt,—we shall then be obliged to class birds with fishes and frogs, which without doubt retain their sense of sight, and guide their movements accordingly, notwithstanding the complete removal of their cerebral hemispheres.

Mammals.—While removal of the cerebral hemispheres (including corpora striata) in the lower vertebrates is compatible with survival for a considerable length of time, the case is different with mammals. In these the operation causes fatal shock, or is followed by secondary effects which result in speedy death. For this reason it has not been found possible to determine, as in the lower vertebrates, what functions, after considerable lapse of time, might still be exhibited by the lower centres in the entire absence of the higher. The mammals on which the operation has succeeded best have been chiefly of the lower orders, such as rabbits, guinea-pigs, and rats. When the hemispheres have been removed from a rabbit or a guinea-pig, the animal, at first utterly prostrate, begins after a varying interval, say, from half an hour or more, to exhibit a capacity for the performance of actions of a considerable degree of complexity. The muscular power of the limbs has, however, become enfeebled to a noteworthy extent, and, relatively, much more so in the fore than in the hind limbs. It is, nevertheless, able to maintain its equilibrium, but sits huddled up, while the legs tend to sprawl or are planted in unnatural positions. It resists attempts to overthrow its balance, and if disturbed regains its former attitude. If the foot or tail be pinched, the animal will bound forward in its characteristic mode of progression, and again settle down when the effect of the stimulus has worn off. It may shake its ears, slightly change its position, rub its snout with its paws, or scratch its body, and again subside into a condition of perfect quiescence. The pupils contract when a light is thrown into the eyes, and the eyelids wink when the conjunctiva is touched. Loud sounds will cause the ears to twitch or provoke a sudden start. According to Longet, colocynth placed in the mouth will cause movements of the tongue and organs of mastication, in all respects resembling those of disgust, and efforts to get rid of the nauseous taste. Ammonia held before the nostrils will cause a sudden retraction of the head, or induce the animal to rub its nostrils with its paws. Not merely does it respond by movements to a pinch or prick of its foot or tail, but, if the stimulation be more severe, it will utter repeated and prolonged cries of a plaintive character. All spontaneity seems to be abolished; but it is usual for the animals, after the period of quiescence has passed, to make apparently spontaneous running movements, which, however, are found to depend upon irritation caused by the secondary changes set up in the wound.

Whether after removal of the cerebral hemispheres rabbits and other rodents can see, is a question which has been the subject of lively controversy between Christiani and Munk.[16] Christiani, after careful severance of the hemispheres and corpora striata immediately anterior to the optic thalami, states that he has seen rabbits pass and repass obstacles, such as legs of chairs and tables, and is of opinion that, though they do not see like normal rabbits, they are still able to guide their movements in accordance with retinal impressions. Munk, on the other hand, denies the accuracy of Christiani's experiments, and holds that rabbits, after removal of the cerebral hemispheres, are absolutely blind, and show no indications whatever that they are influenced by light, except as regards the contraction and dilatation of the pupils. He believes that the apparent avoidance of obstacles by Christiani's rabbits was a pure accident, as the obstacles did not happen to lie in their path.

The question is one which cannot be said to be definitely settled, though the facts mentioned in respect to fishes, frogs, and birds would incline one to believe that Christiani's results and conclusions may have a solid foundation. On this point, however, and on others relating to the sensory and motor faculties of brainless mammals, it is difficult to arrive at altogether satisfactory conclusions, as they, unlike the lower vertebrates, have as a rule so speedily succumbed to the operation. Hence the lower animals' centres have no time to recover from the shock which must necessarily ensue from such a violent rupture of the solidarity previously existing between them and the highest centres. As the cause of death in mammals seems largely dependent upon secondary (inflammatory and other) consequences, and not on the mere fact of removal of the hemispheres themselves, it is much to be desired that some method may be discovered whereby the animals may be maintained alive longer than has hitherto been found possible. The nearest approach to this has been attained by Goltz,[17] who has made a series of careful observations on dogs for prolonged periods, after very extensive destruction of both cerebral hemispheres. Though the destruction has been far from complete in any case, yet the phenomena described by him teach lessons of the utmost importance in the comparative physiology of the brain. Goltz himself has utilised these experiments as the basis of his polemic against cerebral localisation, but we may, for the time, abstract from their bearing in this direction, and consider the facts themselves which he has recorded.

Goltz[18] thus describes a dog in which he had by repeated operations destroyed a large extent of both hemispheres. The amount of primary destruction, together with the secondary atrophy so induced, was so great that the whole brain weighed only thirteen drachms instead of ninety, which should have been the weight of a normal brain in an animal of the same size. This dog had a profoundly demented, expressionless face. Left to itself, it wandered about restlessly, paying no attention to what was going on around it. All its movements were awkward and unsteady, but it exhibited no complete paralysis. It slipped, however, on a smooth surface, and its legs tended to sprawl from under it, so that it would fall upon its abdomen. From this position it would recover itself and again begin its walk. It had the utmost difficulty in feeding itself, though it could find its food when placed in the customary corner of its cage, yet it seemed unable to find it when placed in an unusual position, and even when the food was brought directly under its nose it would snap aimlessly, as often outside the dish as in it. It was utterly unable to use its paws for holding and gnawing a bone. It paid no attention to strangers, men or animals; did not wince at the brightest light suddenly thrown in its eyes, and exhibited no fear at any kind of threat. Though it appeared absolutely blind, yet numerous and varied experiments demonstrated that it was able to guide its movements by sight. It did not run against obstacles as it invariably did when its eyes were blindfolded. It was not deaf, for it could be awakened out of sleep by a loud sound, but the character of the sound made no further impression upon it. It did not heed tobacco smoke or chloroform vapour, and would eat a piece of wood as readily as a bone. It did not appear to be influenced by the proximity of another dog. It exhibited no emotion of anger when another stole its food, nor did it express pleasure in the usual way by wagging its tail. Its cutaneous sensibility was everywhere diminished, but no part was absolutely without feeling. If its foot was severely pinched, it would draw its leg back and bite angrily.

The symptoms exhibited by this dog and another similarly operated upon are thus summed up by Goltz: "Both animals were essentially only wandering, eating, and drinking reflex machines. Both were utterly indifferent to man and beast. Both had obtuseness of all their senses. Each had sensation in every part of its skin, and effected movements with all its muscles. Neither exhibited any expression of pleasure; on the other hand, both were easily roused to wrath. Both were profoundly demented."

The impairment of all the sensory and motor faculties in these and other dogs operated upon by Goltz—in which it is

[16] Physiologie des Gehirnes, 1885.

[17] Verrichtungen des Grosshirns: Pflüger's Archiv, 1876-1888.

[18] Op. cit., p. 134.

certain that not one of the specific centres was entirely destroyed—would without doubt have been more profound than in rabbits and guinea-pigs had it been possible to extirpate the hemispheres entirely. And when we come to consider the effects of partial cerebral lesions in man, we shall see reason for believing that if in him the whole of the hemispheres were removed, providing this were compatible with life, there would be such complete and enduring paralysis of motion and annihilation of all the forms of sense that scarcely a trace would remain to those responsive and adaptive reactions which survive the removal of the cerebral hemispheres in animals lower in the scale.

It thus appears that, notwithstanding the complete extirpation of the cerebral hemispheres, animals, in proportion to their lowness in the scale, besides duly retaining and regulating all their organic functions, remain possessed of varied powers which may be classed generally under the heads of equilibration, coördination of locomotion, emotional expression, and adaptive reactions in accordance with impressions made upon their organs of sense. These are organised in the mesencephalic and spinal centres in the highest degree in fishes, frogs, and pigeons, to a less degree in the lower mammals, and least of all in monkeys and man.

I do not intend on the present occasion to enter on a consideration of the respective *rôles* of the spinal, cerebellar, and mesencephalic centres in the regulation of these different forms of activity. We may—practically in some and theoretically in all—separate the mesencephalon and spinal cord into a congeries of individual centres, each with its own afferent and efferent nerves, coördinating synergic movements, each in its own province, and all coöperating together harmoniously by means of commissural or intracentral fibres. The individual metameres form units in a complex whole, acted on by the nerves of special sense and subordinate to the supreme nerve centres, through which the adaptation of the organism to its environment is effected. Nor will I enter on a discussion of the vexed question as to whether the actions of the lower centres are indicative or not of intelligence. Most of the differences on this point turn mainly on the meaning of terms. If, with Mr. Romanes, we regard fluctuating adaptation to external conditions as the criterion of intelligence, we shall certainly not be able to deny that the actions of the lower centres are indicative of intelligence in this sense. For the observations of Steiner, Schrader, and others on the lower vertebrates show that forms of activity which we are accustomed to regard in man as exclusively cerebral and indicative of conscious discrimination, are capable of being manifested by these animals in the entire absence of their cerebral hemispheres. Nor can we say that spontaneity, which we have also been accustomed to regard as conditioned by the cerebral hemispheres, is entirely abolished in brainless animals; for we see that, without any apparent change in external conditions, they move spontaneously, and comport themselves not unlike normal animals. We can, however, in most cases, if not in all, refer these so-called spontaneous movements to immediate ento- or epi-peripheral impressions; whereas in normal animals, though their so-called spontaneity is primarily derived from a similar source, the connexions are more remote and far more difficult to trace.

These and other similar facts lead to the conclusion that between the simplest reflex action and the highest act of intelligence there is no essential difference, each passing by insensible gradations into the other. We can infer only, we can prove nothing conclusively regarding the existence of states of consciousness in others than ourselves, and less easily in the case of the lower animals than in man. But we are entitled to say that the activity of the lower centres does not affect the consciousness of the individual; for, when by lesion of the internal capsule the sensory tracts are cut off from their cortical connexions, the individual has absolutely no consciousness of impressions made upon his organs of sense, so that we may conclude that, in man at least, states of consciousness are indissolubly connected with the activity of the cerebral hemispheres.

The results of ablation of the cerebral hemispheres indicate nothing for or against the doctrine of functional localisation, nor do the experiments of Goltz in the least degree militate against the existence of specific centres; for if, even after complete bilateral extirpation of these centres, the functions which survive do not transcend those capable of being manifested in the entire absence of the cerebral hemispheres, there still remains the question whether the lesions have not caused a loss or paralysis of something of a higher order. That this is so is capable of ample demonstration, of which not the least part has been contributed by the very facts which Goltz himself has ascertained through the numerous and varied devices which he has so ingeniously contrived. It is no explanation of the defects which admittedly result from removal of the cerebral hemispheres to say that they are caused by a loss of intelligence. This is merely restating the facts in a more metaphysical but less intelligible form. We are not, however, dealing with metaphysical terms when we are studying the effects of lesions of the cerebral cortex. We are dealing with material entities connected with sensory and motor tracts, and it is our object to determine, if possible, what are the anatomical and physiological factors which are correlated with the functions which we generalise under the head of intelligence; and there appears to be nothing which can *a priori* be urged against the notion that the various factors of intelligence have their substrata in definite regions specifically related to certain motor and sensory functions. Flourens, as is well known, denied every species of localisation in the cerebral hemispheres. To this conclusion he appears to have been led not more by his own experiments than by the prevalent conceptions as to the unity and indivisibility of the mind, and as a reaction against the organology of Gall and his followers. To Gall, however, let us, in passing, pay the tribute that in his analysis he followed strictly inductive methods, and made many observations of enduring value; though his synthesis of the brain as a congeries of separate organs, each autonomous in its own sphere, and all mysteriously inherent in some unifying, immaterial substratum, has failed to commend itself to the scientific world. Flourens thus sums up his conclusions:—

"Thus one may remove, anteriorly, or posteriorly, from above or from the side, a considerable portion of the cerebral lobes without destroying their functions. Even a small portion of these lobes, therefore, suffices for the exercise of their functions. In proportion to the extent of the removal all the functions become impaired and gradually fail; and beyond certain limits they are altogether annihilated. The cerebral lobes, therefore, coöperate as a whole in the full and complete exercise of their functions. Finally, when one form of perception is lost, all are lost: when one faculty disappears, all disappear. There are, therefore, no special seats either of special faculties or special perceptions. The faculty of perceiving, judging, and willing one thing resides in the same region as that of perceiving, judging, and willing another; consequently this faculty, essentially one, resides essentially in one organ."[19]

Though the doctrines of Flourens met with general acceptation, they were contested on experimental grounds by some physiologists, more particularly by Bouillaud.[20] The experiments of Bouillaud on pigeons, dogs, and rabbits led him to conclude that destruction of the anterior lobes alone caused symptoms of profound dementia. Though the animals were able to feel, see, hear, smell, and to execute a number of spontaneous and instinctive movements, they were unable to recognise their relations to the objects by which they were surrounded. They were unable to feed themselves, and had in general lost all reasoning powers. An animal, said he, in which the anterior lobes have been destroyed, "though deprived of the exercise of a more or less considerable number of intellectual acts, continues to enjoy its sensory faculties; a proof that 'sensation' and 'intellection' are not one and the same function, and that they have separate localities." Bouillaud's results have, I think, received confirmation and elucidation from my own experiments on monkeys, as well as those of Goltz and Schrader on dogs and pigeons. Bouillaud, however, did not consider that his own experiments had done more than merely raise the question of localisation, and it was generally believed that, so far at least as experimental data were concerned, the doctrine of specific localisation had no secure basis of support. From the clinical standpoint, however, facts were continually being presented which seemed altogether unintelligible except on some theory of localisation; and clinical observers, such as Bouillaud himself, Andral, and others, wisely suspended their judgment until farther facts should be brought to light, which might

[19] Op. cit., p. 99.

[20] Rech. Expérim. sur les Fonctions du Cerveau, et sur celles de sa Portion Antérieure en particulier: Journ. de Physiol. Expérim., 1830, t. x., p. 91.

serve to explain the apparent irreconcilable discrepancy between human pathology and experimental physiology.

Bouillaud[21] recorded certain clinical facts which seemed to indicate a connexion between lesions of the anterior lobes and loss of speech, thus affording some confirmation of the theories of Gall on the subject. Dax (1836) established the special relation of aphasia to right hemiplegia and lesions of the left hemisphere, but the connexion between aphemia, or aphasia, and lesion more particularly of a definite region of the left hemisphere—namely, the base of the third frontal convolution—was first pointed out by Broca (1861). Broca's observations have since been amply confirmed by clinical and pathological research, and further elucidated by physiological experiment.

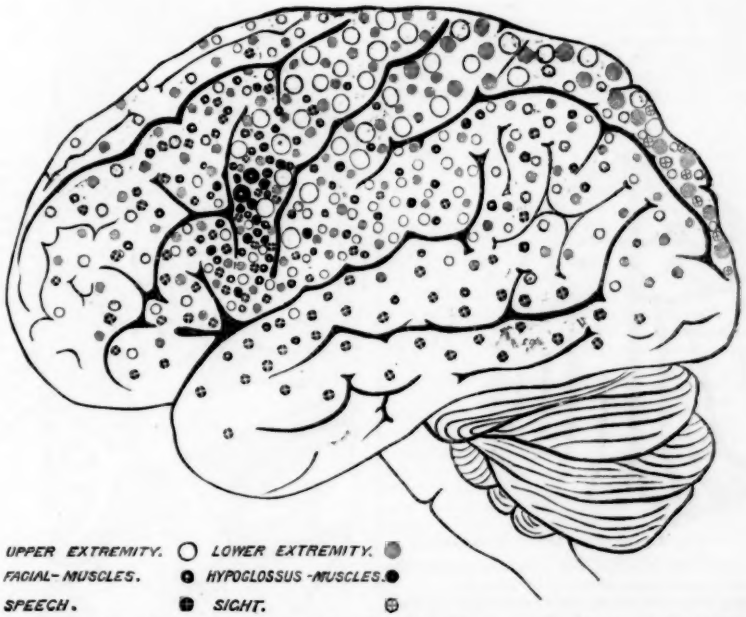
The next great advance in cerebral localisation was made by Hughlings Jackson (1861),[22] who, from a study of the forms of epilepsy now appropriately known by his name, furnished cogent reasons for believing that certain convolutions near, and functionally related to, the corpus striatum had a direct motor signification. By irritation or "discharging lesions" of these convolutions, localised, or general unilateral convulsions of the opposite side of the body were induced. Owing, however, to the fact, as Hughlings Jackson has remarked, that "the damage by disease is often coarse, ill-defined, and widespread," the determination of the functions of the brain by the clinico-pathological method had made comparatively little progress, there being apparently no constant uniformity between the seat of the disease and the symptoms manifested. The difficulty of discriminating between the direct and indirect effects of cerebral lesions has furnished Brown-Séquard[23] with arguments in favour of his peculiar views, that all the symptoms of cerebral disease are due to some dynamic influence exercised by the lesion on parts situated at a distance (and always apparently out of reach), which are credited with the functions lost or otherwise disturbed.

A glance at the accompanying diagram (Fig. 2) founded by Exner[24] on the examination of a number of cases of lesion of the left hemisphere will show you the extraordinary diversity in position of those accompanied by practically the same symptom. It will be seen, for instance, that though the lesions which cause affection of the upper extremity are mostly grouped in a certain region, yet there is scarcely a point on the convexity of the hemisphere lesion of which has not caused a similar result. These and such like are the data on which Exner has founded his theory of *absolute* and *relative* centres; absolute centres being those destruction of which invariably, relative centres being those destruction of which only frequently, induces the same symptom. The distinction appears to me to have no valid foundation. Mere frequency is not a sufficient basis on which to found causal relationship. For, if the so-called relative centres can be, and have been times out of number, destroyed without any disturbance of the function with which they are supposed to be related, and if the said function can be annihilated while the relative centres are intact, it is obvious that the relationship is nothing more than mere coincidence or juxtaposition.

The whole aspect of cerebral physiology and pathology was revolutionised by the discovery, first made by Fritsch and Hitzig in 1870,[25] that certain definite movements could be excited by the direct application of electrical stimulation to definite regions of the cortex cerebri in dogs. As these experiments are now of historic interest, I extract the accompanying figure (Fig. 3) and the description, in their own words, of the facts which they had at that time ascertained.

"The centre for the neck muscles (Fig. 3, Δ) lies in the lateral part of the pre-frontal gyrus at the point where the surface of this convolution abruptly descends. The outermost extremity of the post-frontal gyrus contains in the neighbourhood of the lateral end of the frontal fissure (Fig. 3, +') the centre for the extensors and abductors of the fore limb. Somewhat behind the same, and nearer the coronal fissure (Fig. 3, +) lie the ruling centres for the flexion and rotation of the limb. The centre for the hind leg (Fig. 3, ‡‡) is also found in the post-frontal gyrus, but nearer the middle line than that of the fore leg, and somewhat further back. The facial (Fig. 3, ○) is innervated from the middle part of the super-Sylvian gyrus. This region generally has an extension of over 0·5 centimètre, and

FIG. 2.



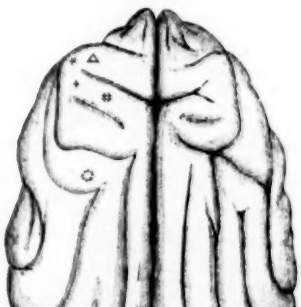
After Exner's Tafel XXV. The diagram is marked with larger and smaller circles of the same order. The larger circles indicate the absolute centres, the smaller the relative centres. The intensity of the latter is indicated by the closeness of the circles to each other.

[21] Archives de Médecine, 1825.
[22] Clinical and Pathological Researches on the Nervous System.
[23] Physiological Pathology of the Brain: THE LANCET, 1876; and Archives de Physiologie, 1877-1890.
[24] Localisation der Functionen in der Grosshirnrinde des Menschen, 1881.
[25] Reichert, u. Du Bois-Reymond's Archiv, 1870, Heft 3.

stretches before and behind the bend over the Sylvian fissure. We must add that we did not always succeed in getting the neck muscles in action from the first-mentioned point. The muscles of the back, tail, and abdomen we have often enough excited to contraction from points lying between those marked, but no circumscribed point from which they could be individually stimulated could be satisfactorily determined. The whole of the convexity lying behind the facial centre we found absolutely unexcitable, even with altogether disproportionate intensity of current."

The subject of the electrical excitability of the cortex and its signification was next taken up by myself in 1873,[26] more particularly with the object of putting to experimental proof the views of Hughlings Jackson in reference to the causation of unilateral epileptiform convulsions. While amply confirming these doctrines in all essential particulars, my attention became specially directed to the question of definite localisation, and I was led minutely to explore, not only the hemispheres of dogs, but also those of monkeys and various other orders of vertebrates. Similar researches have been undertaken and published in almost every country, and by experimenters too numerous to mention, but nowhere with greater care and detail than by Beevor, Horsley, and Schäfer[27] in our own. The facts revealed by electrical exploration of the hemispheres have been, and still are, the subject of considerable diversity of opinion, and by some, as Brown-Séquard,[28] are regarded as of no greater significance than the contortions which may be induced by tickling the sole of the foot. There cannot, however, be a doubt that from them and the further experiments to which they have pointed the way has sprung the whole modern doctrine of exact cerebral localisation.

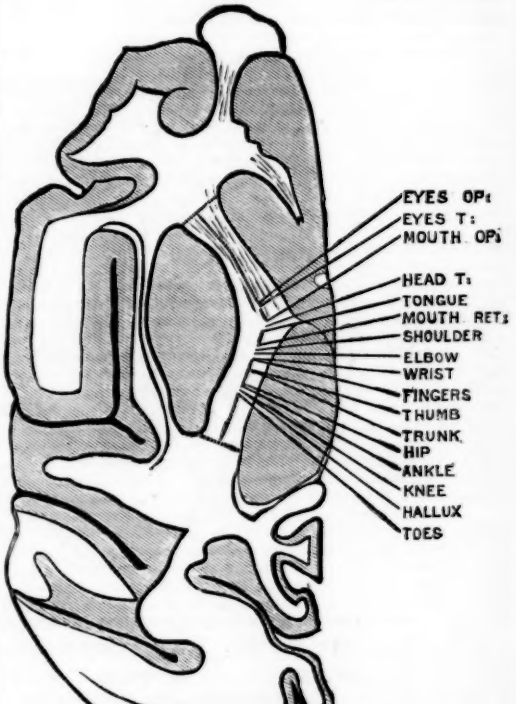
FIG. 3.



Centres of the brain of the dog, according to Fritsch and Hitzig.

Before discussing the different specific reactions and their functional significance, it will be desirable to enter on a brief consideration of the characters and conditions of the excitability of the cerebral cortex. In normal states the grey matter of the cortex is entirely or almost entirely, insensible to mechanical stimulation. Luciani, however, states that though the convexity of the hemisphere does not react to this form of stimulation, yet he has been able to produce movements of the opposite limbs by irritation of the walls of the crucial sulcus. Couty[29] also states that he has found the convolutions mechanically excitable after ligature of the cerebral arteries. Whether we accept these statements as being strictly accurate or not, it is certain, as was shown by Franck and Pitres,[30] that when the cortex has become inflamed and congested by exposure or traumatic lesion, it becomes irritable to mechanical stimulation, and may respond not merely by partial movements of the opposite limbs, but also by a unilateral epileptic fit. This is, in fact, the experimental induction of the discharging lesions described by Hughlings Jackson. It is also held by some—for example, Landois[31]—that the cortex is chemically excitable, a fact, however, which may be due to the inflammatory condition of the tissues thereby induced. The most effective excitant is the application, by closely approximated electrodes, of a galvanic or faradaic current of moderate intensity. Fritsch and Hitzig, in their researches, employed the former, but preference has generally been given by other experimenters to the faradaic current as being the best calculated to elicit the characteristic reactions of the cortical centres. When an animal is sufficiently narcotised to abolish all restless or spontaneous movements—and the anæsthesia must not be too profound, otherwise all reactions cease,—the application of the electrodes to different regions calls forth definite motor reactions with such uniformity that, when once the limits of the said region have been accurately defined, one may confidently predict the exact movement which will occur in animals of the same species. This is a fact which is beyond all dispute, and has been frequently demonstrated by myself, Horsley,

FIG. 4.



Arrangement of the motor fibres of the internal capsule, according to Beevor and Horsley.

and others, and indeed may be regarded as an ordinary lecture experiment.

Couty[32] is, perhaps, the only physiologist whose results appear to contradict the above statement; but as his experiments were performed on animals not narcotised, it is probable that any irregularity in the effects of excitation was due to spontaneous movements on the part of the animal. Some variations from absolute uniformity may, however, occur from want of symmetry in the convolutions, and still more from changes in the excitability of the cortex. These are particularly apt to occur after repeated exploration, so that a mixture of effects may be produced by diffusion of the current from the one centre into others which have been rendered hyper-excitable by previous stimulation. The lateral diffusion of the current, which always occurs more or less, is the chief obstacle to the precise delimitation

[26] Experimental Researches in Cerebral Physiology and Pathology: West Riding Lunatic Asylum Reports, vol. iii., 1873.
[27] Phil. Trans., 1888. [28] Archives de Physiologie, Jan. 1890.
[29] Comptes Rendus, March, 1879.
[30] Archives de Physiologie, 1883.
[31] Abstract in Neurolog. Centralblatt, 1890, p. 145.
[32] Le Cerveau Moteur: Archives de Physiologie, 1883.

of the cortical centres by the method of excitation. Hence the limits of a region may be somewhat differently given by different experimenters; but, making due allowance for all these sources of error, it has been found possible to arrive at a remarkable degree of harmony as to the locality and extent of the respective areas. The extra-polar diffusion of current which can be demonstrated in the brain, as in other animal tissues, has been regarded by Dupuy[33] as an insuperable objection to the theory that the results of application of the electrodes to the cortex are due to stimulation of the cortex itself; and attempts are made to explain them away by mere physical conduction of the currents to centres and tracts at the base of the brain. But no satisfactory explanation can thus be afforded of the manifest differences in reaction which follow the application of the electrodes to regions in close proximity to each other, nor of the total absence of reaction when the electrodes are placed on the island of Reil, which is nearer the base of the brain than other regions which act uniformly and without fail.

The chief objection to the direct excitability of the cortex itself is found in the fact that, even after removal of the cortex, similar reactions are still obtainable when the electrodes are placed on the subjacent medullary fibres. This was first pointed out by Burdon-Sanderson,[34] and has been confirmed by all subsequent experimenters. After removal of the cortex, however, the medullary fibres lose their excitability, like motor nerves separated from the anterior cornua of the spinal cord, so that, after a lapse of four days, no reactions can be produced by the strongest stimulation. This fact completely disposes of the physical-conduction-to-the-base-of-the-brain hypothesis. It has thus been satisfactorily established that the cones of medullary fibres, corresponding to the respective cortical centres, are functionally differentiated like the cortical centres themselves, and, as has been shown by Franck and Pitres,[35] and more recently, with greater detail, by Beevor and Horsley,[36] maintain their individuality, and are écheloned in definite and regular order in the internal capsule.

On the accompanying figure (Fig. 4), kindly supplied me by Dr. Beevor, are marked the points on the internal capsule from which, according to their recent researches, minimal stimulation excites the respective movements which are indicated on the margin. But it does not follow because the medullary fibres are excitable that the corresponding cortical regions are unexcitable, and that the current merely passes through them. It is, *a priori*, more likely that there is also functional differentiation of the cortical centres to which they are distributed, and that the grey matter is, under normal conditions, the natural excitant of the reactions which we are able to produce by artificial stimulation with the electric current. And a comparison of the respective reactions of the cortex and medullary fibres indicates such differences as can only be explained on the supposition that the cortical centres are themselves excitable.

First, as regards the relative excitability of grey matter and subjacent medullary fibres. This is a point on which there are some differences of opinion, but Putnam found[37] the medullary fibres less excitable than the cortex, so that in order to produce the customary reaction it was necessary to use a much stronger current than before. This has been confirmed by Franck and Pitres, who have further shown that the diminished excitability cannot be accounted for by mere shock or hæmorrhage, inasmuch as the neighbouring grey matter acted as readily as before. They have further given reasons for believing that the contrary results obtained by Richet,[38] and Bubnoff and Heidenhain[39] are due to the action on the cortex of the chloral and morphine under which their experiments were performed. These agents, without doubt, paralyse the excitability of the grey matter. It was noted by Fritsch and Hitzig in their experiments that the anodal closure was a more effective stimulus than the cathodal, a fact which might be interpreted as signifying that the real stimulus proceeded from the virtual cathode in the deep layers of the cortex, or termination of the medullary fibres. This, however, has been shown by Gerber[40] not to be uniformly the case. Gerber finds that when the cortex is in a normal state the cathode is the more effective stimulant, but that, when changes have occurred from long exposure, the anode predominates. These experiments would, therefore, indicate that in the normal condition of the brain the laws of galvanic excitability are the same as for motor nerves.

Another important difference between the reactions of the cortex and the subjacent medullary fibres, which was first pointed out by Franck and Pitres, is that the time lost between the application of the stimulus and the occurrence of muscular contraction is much greater in the case of the former than the latter. This interval, after deducting the time necessary for the transmission of the impulse through the spinal cord and motor nerves, indicates a retardation in the cortex of 0·045 second. After removal of the grey matter and application of the electrodes to the medullary fibres, the period of retardation diminishes to 0·030 second—that is, about one-third less,—and this difference is put at a considerably higher figure by Bubnoff and Heidenhain. The signification of this fact is that the grey matter of the cortex does not behave like an inert layer, which merely allows transmission of the electric current to the medullary fibres, but, like other nerve centres, stores up and transforms the stimuli which it has received into its own energy.

There is also a characteristic difference between the muscular curves registered on stimulation of the cortex and medullary fibres respectively. In the latter case the curve rises abruptly, and is of short duration; while in the former it rises more gradually, is more prolonged, and frequently marked by the occurrence of a secondary tetanus, which latter is altogether peculiar to the cortex, and is never seen when the medullary fibres alone are stimulated. The cortex is apt, after repeated stimulation, or after the receipt of a succession of stimuli, each insufficient to produce reaction, to respond by tonic, followed by clonic, spasms of the correlated muscles of a truly epileptic type. These convulsions tend to spread and become generalised in the order and sequence originally described by Hughlings Jackson. They never occur on stimulation of the medullary fibres alone, apart from the intervention of the grey matter of the cortex on the one side or the other, and cannot be produced if the cortical centres are entirely destroyed on both sides. The duration of the effects of stimulation of the medullary fibres is strictly proportional to that of the stimulus which is applied to them. We shall also see as we proceed that the effects of localised destruction of the cortex are the counterpart of those of irritation, however induced, and we may from this conclude that there is the same functional differentiation in the cortex as in the medullary fibres, even if the facts which I have just mentioned should not be regarded as of themselves completely establishing this proposition.

[33] Examen de quelques Points de la Physiologie du Cerveau, 1873.
[34] Proceedings of the Royal Society, June, 1874.
[35] Comptes Rendus Société de Biologie, 1877.
[36] Proceedings of the Royal Society, No. 286, 1890.
[37] Boston Med. and Surg. Journal, 1874.
[38] Sur les Circonvolutions Cérébrales, 1879.
[39] Pflüger's Archiv f. Physiologie, 1881.
[40] Beiträge zur Lehre von der electrischen Reizung des Grosshirns: Pflüger's Archiv für Physiologie, Band xxxix., 1888.

TWO CASES OF INTUSSUSCEPTION TREATED WITH THE AID OF BARNES' BAG;

WITH REMARKS.

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OF the two cases which I propose to relate, for the purpose of showing that Barnes' bag may sometimes be usefully employed for reducing and preventing the return of an intussusception, the first occurred in 1877. The patient, a man of fifty-seven, was in the London Hospital under my colleague, Dr. Stephen Mackenzie. Six months before admission he had noticed that there seemed to be a constriction in his rectum. He passed his fæces in small lumps, streaked with blood. The bleeding increased, until it amounted, according to his estimate (which was probably excessive) to as much as a teacupful three or four times daily. These symptoms subsided under treat-

ment, but were followed by loose motions and by two attacks of bleeding and pain. During the later attack he felt the gut protrude externally for two inches, and then return. This happened three times in half an hour, and the pain was excruciating. The pain and bleeding continued up to admission, seven days from the outset of the attack, and a slimy discharge took place from the rectum. On admission the patient was a pale, cachectic, wasted man. The abdomen was distended, tympanitic, and tender, especially in the hypogastric region. No tumour could be felt in the abdomen. On rectal examination a rounded, firm swelling about the size of a hen's egg, with a velvety surface, was detected. The finger could be passed all round it, and at its apex was an orifice into which the finger could be readily passed. Examination with the speculum showed that the mucous membrane was deeply congested. There could be no doubt that an intussusception existed, and Dr. Mackenzie, whose description I have followed, asked me to see the case and treat it. As the intussusception was within reach, and, from the absence of abdominal tumour, appeared likely to be of limited extent, I thought that it would very probably yield to the equable pressure which could be exercised on it by distending a Barnes' bag with fluid after introducing it into the rectum empty, and so it proved. The intussusception gradually receded, and finally disappeared altogether. "With reposition of the bowel the patient passed a quantity of flatus and liquid fæces, and obtained great relief. A swelling was noticed in the left inguinal region, but this disappeared in a few days. He remained in the hospital a couple of months; the hæmorrhage and slimy discharge disappeared, but his motions were nearly always liquid or semi-solid, and he suffered from flatulence and crampy pains." He continued under Dr. Mackenzie's observation until his death, about a year and a half later. The diagnosis which Dr. Mackenzie formed at the time when the patient was in the hospital was "annular stricture of the descending colon, leading to prolapse of the bowel through the straining efforts necessary to overcome the obstruction";[1] and at the post-mortem which Dr. Mackenzie obtained at the Leytonstone Workhouse he found primary cancer of the sigmoid flexure and secondary cancer of the peritoneum and liver.

The second case occurred recently. Alfred B——, seven months old, was brought to the receiving-room at the London Hospital by his mother on Sunday, Nov. 17th, 1889. She said that the bowel had come down, and on examination by my house surgeon, Mr. Hicks, the child was found to be suffering from intussusception, and was at once admitted into the wards. The mother stated that about a fortnight ago she had noticed one morning that the child seemed to be in great pain, very restless, crying incessantly, and vomiting. About four o'clock in the afternoon of that day the child passed a quantity of blood. The mother at once took him to a local doctor, who treated him up to his admission into the hospital. Blood continued to flow from the rectum for three days, and then stopped, excessive diarrhœa taking its place. Diarrhœa and vomiting continued till the child was brought to the hospital. On the previous day the bowel had descended, and the mother had pushed it back; but as it would not remain up she thought it best to apply to the hospital for relief. After admission Mr. Hicks saw the child, and reduced the intussusception by injecting two pints of water with a Higginson's syringe. The injection was effectual for a time, but the next morning the bowel was down again. It was noticed that the ileo-cæcal valve formed the apex of the intussuscepted portion of bowel which projected considerably beyond the anus. Reduction of the intussusception was easy as far as the upper part of the rectum; but all attempts to reduce it further by means of injections of fluid and insufflation aided by position failed, as shown, on examination of the abdomen, by the persistence of a characteristic tumour in the position of the descending colon and sigmoid flexure. As often as the bowel descended it was replaced and retained by strapping the buttocks together. In spite, however, of all that could be done, it constantly recurred, and on Nov. 22nd I made an ineffectual attempt to reduce it by injections and insufflation, aided by suspension of the child by his legs. Finding that I could not succeed in this way, I reduced the intussusception as far as it would go, and retained it by the introduction into the rectum of an empty Barnes' bag, which was then distended with air. Instructions were given that the bag should be removed twice a day to allow the escape of liquid motions. My primary object was to prevent the bowel from descending, with a view to favouring further efforts at reduction, and I hoped that the peristaltic action of the intestine, exerted fruitlessly for the expulsion of the bag, might act in the opposite direction, and assist the devolution of the involved intestine. During the first day little impression was made, for the bowel descended when the bag was removed, and I then had the bag replaced and retained for twenty-four hours. At the end of that time the tumour had disappeared, and on taking away the bag a large quantity of flatus escaped. On Dec. 4th the notes state that "the patient has from day to day been gradually getting better from the intussusception, passing fairly good motions." On only one occasion subsequently to the reduction was any blood passed; and as the abdomen was flaccid, and no tumour could be felt on the most careful examination, this escape was attributed either to some remaining congestion of the previously engaged bowel or to ulceration. The child continued regularly to pass motions, was free from sickness, and took the breast as usual, but he began to emaciate. A large abscess formed in the neck and was opened by Mr. Gedge. An extensive purpuric patch appeared on the left side of the abdomen, reaching from the ribs to the crest of the ilium, with small spots and petechiæ around it, and another large patch occupied the left side of the neck. The abdomen was retracted; there was no trace of any tumour on either side; the protrusion of gut did not return, and the bowels were regularly relieved. Nevertheless the child became thinner and weaker, and died on Dec. 13th, twenty-six days after admission, and nearly three weeks after the reduction of the intussusception.

The mother refused to allow any inspection, even of the abdomen only, notwithstanding all persuasion, and thus the conclusive demonstration of the efficacy of the treatment and the explanation of the cause of death are necessarily wanting. I cannot doubt, however, that the intussusception was reduced, because no tumour could be detected, natural motions free from blood were passed, there was no sickness, and the child was free from pain. Granting this, the question arises what was the *modus operandi* of the distended bag in the reduction of the intussusception? Two explanations present themselves. The first is that the reduction was due to the peristaltic or anti-peristaltic action of the bowel which contained the intussusception, and this appears to me to be exceedingly probable. A second idea which occurred to us was that the reduction might be due to the accumulation of gas above the bag. The bowel not being sufficiently nipped to prevent flatus from passing, it would escape through the apex of the intussusception, and then collect between the intussuscipient and intussuscepted portion, and so exert the same influence as artificial insufflation. If this view be tenable the method of reduction may be described as the method of natural insufflation through the agency of Barnes' bag. Whichever may be the correct explanation, it is apparent that the use of the bag was very different in the second case from its use in the first. The bag in the first case was simply a convenient method of applying pressure. It acted in the same way as injections or insufflation, but more expeditiously, with less risk to the bowel, and with greater accuracy and precision. In the second case it acted indirectly by blocking the canal, forming a *point d'appui* for the peristaltic contraction of the muscular fibres of the intestine, and preventing the exit of flatus. It also prevented the protrusion of the bowel from the rectum, and, if it had done nothing else, would have enabled us to renew our efforts at reduction by injections, insufflation, manipulation, and position, with improved prospects of success. The cases in which this adjunct to our methods of treating intussusception may be found serviceable are clearly not the cases of acute strangulation, in which nothing can pass through the engaged intestine, or cases where adhesions have formed, but those which are also open to treatment by injections and insufflation, but which readily recur on replacement or do not disappear entirely under injections of air or fluid. In these subacute or chronic cases a trial of the method would not prejudice any other measures to which, in the result of failure, it might seem advisable to resort. It may also be useful in keeping up troublesome prolapse of the mucous membrane of the rectum.

Finsbury-square, E.C.

[1] Brit. Med. Jour., May 31st, 1879, p. 806.

THE INFLUENZA EPIDEMIC AND THE PUBLIC ELEMENTARY SCHOOLS.

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MEDICAL OFFICER OF HEALTH FOR THE CHELMSFORD AND MALDON RURAL SANITARY DISTRICT.

THE following paper embodies the results of an investigation which I have recently been making into the effect of the epidemic influenza upon the children in the public elementary schools in the towns of Chelmsford and Maldon and the rural sanitary districts immediately surrounding them. The total area of these districts is about 300 square miles, and the population, in round numbers, 57,000. The information has been collected on a systematic plan. On March 8th a circular letter was sent to the head master or mistress of every public elementary school in the two rural districts, and towards the end of the month similar letters were sent to the principal schools in the urban districts. Replies were asked to the following questions:—1. Has there been any extensive prevalence of influenza in your district? 2. Upon what date did you first notice its effect upon the attendance? 3. Upon what date was the attendance lowest? 4. How did it affect the attendance in the various departments? 5. What proportion of the scholars have been affected? 6. Have you any cases at the present time? 7. Have you observed any after effects? 8. Any other information you may think of interest, please give. In the majority of cases the replies were satisfactory, but in many the information was so vague or otherwise of such a character as to necessitate my visiting the school and district to supplement it by personal investigation. In this manner particulars have been obtained from seventy-four schools, ranging in average attendance from 30 to 200, and embracing altogether about 6000 scholars of all ages between four and thirteen years. I may add that the whole district is a purely agricultural one, thinly populated, with no mines and few manufactories—none, in fact, in which children are employed. The period of the year is one when there is no employment for the children on the land, so that parents were not likely to make the influenza an excuse for keeping the children from school for such a purpose.

During the autumn of last year whooping-cough was very prevalent in several parts of the district, and caused a considerable number of deaths. In one parish there had been a serious epidemic of measles, and the schools were closed on this account when the influenza appeared. In many other villages there was an unusual amount of sickness amongst the children. In mid-December my attention was drawn to an infant school in which the attendance had fallen to about one-fourth, the absence of the remainder being certified as due to illness. The medical practitioner in the district informed me that the sickness was of an indefinable character, the symptoms usually being slight feverishness and malaise. In other parishes a similar condition seems to have prevailed, and caused the teachers to assert that the influenza was affecting the children before Christmas, or some time before typical cases were observed amongst the adult population. In a group of parishes at the extreme north-west of my district the influenza was stated to have attacked the children in November. The replies received from the school mistress at Pleshey are worth recording.

Reply to Question 1: Yes, for about three weeks, chiefly amongst children.
" " 2: Nov. 18th, 1889.
" " 3: Last week in November, 1889.
" " 4: Considerably, but especially in the infant class.
" " 5: Nearly one-half.
" " 6: Not amongst the scholars, but there have been several cases amongst adults lately.
" " 7: No.

Unfortunately I heard nothing of this outbreak at the time, and all the information I can now gain from the villagers and from the medical officer, who attended many of the cases, is to the effect that about the middle of November children were taken ill in rapid succession, the symptoms being feverishness, headache, cough, and bronchitis. So far as I can learn, there was no catarrh of the nose or eyes, and no limb pains. Several deaths occurred from bronchitis and broncho-pneumonia. Children attacked were absent from school periods varying from two or three days to two or three weeks. Dr. Cockey, who attended many of the cases, says about two-thirds of the children in the village suffered, and few or no adults. Singularly enough, when the epidemic influenza reached the village at the end of February, a considerable number of adults were attacked, but very few children. I find at the end of November cases of a similar character were fairly common in Great and Little Waltham, The Chignals, and Mashbury, in all cases materially reducing the average school attendance. In the extreme north-east of the Maldon district there seems to have been undoubted cases of influenza amongst adults during the last week of November, and Mr. Salter, the district medical officer, says it prevailed in certain parishes pretty extensively about the second week in December. But in every school in that district the first cases were said to have occurred in the week ending Jan. 17th. When the report from this locality first reached me I was inclined to think some form of epidemic catarrh had probably preceded the advent of the true influenza; but, after visiting the district and seeing Mr. Salter's very careful notes, I am obliged to believe that true influenza, or something very closely allied to it, prevailed here at the end of November. The precise date when the first cases of influenza appeared in the various schools cannot, for obvious reasons, be always accurately ascertained, but the week during which such outbreak occurred, I have assured myself, could in nearly every instance be determined with tolerable certainty. In three parishes undoubted cases seem to have occurred before or during the brief Christmas holiday. In nine the first cases were noticed in the week ending Jan. 10th, but in most of the parishes the outbreak occurred in the following week, ending Jan. 17th. One or two schools were not affected until the middle of February, and in one school only (North Fambridge) had no case occurred up to March 10th. The numbers of parishes affected during the weeks of January and February and the total numbers in which the influenza was prevalent at the end of each week are tabulated below.

Date of week ending:	Number of parishes attacked.	Total number in which influenza had appeared.
Jan. 3	—	3
10	9	12
17	25	37
24	6	43
31	3	46
Feb. 7	4	50
14	2	52

In four other parishes so few cases had occurred that no precise date could be given, and in one parish no case had occurred. At present I have traced no distinct relation between these various dates and the configuration of the districts, the railway routes or the highways, save that the highest portions of the district were amongst those which were earliest attacked.

During January it was a common occurrence for children to be taken suddenly ill in school. One schoolmaster informed me that many children had "fainted" in school that month; others had been attacked with headache and vomiting, which were almost invariably the first symptoms observed. Thus the master at Great Waltham school observes: "On one occasion with the school windows open, six boys in one class were attacked with nausea in the course of an hour. I at the same time felt a slight stinging sensation in the nose and throat." The rapidity with which the epidemic reached its acme varied in an extraordinary degree. In a few instances the schools had to be closed for lack of scholars within a week of the onset; in others, where ultimately a large proportion of the children were attacked, only a few cases occurred at a time, and the school attendance was never seriously affected. In a small school at Cricksea one child had a well-marked attack during the week ending Feb. 7th, yet although no precautions whatever were taken no other child was affected. In the large village of Tollesbury the adult population has suffered very severely, yet only about a dozen cases were known to have occurred amongst the school children, and most of these were in the week ending Jan. 17th. In this village, as also in Pleshy, Great and Little Leighs, Cold Norton, and

probably Wickham Bishops the epidemic seems to have been confined almost exclusively to the adult population.

Number of weeks which elapsed between onset and acme of the disease.	Number of parishes.
1 week...	13
2 weeks	13
3 ,, ...	7
4 ,, and over	6

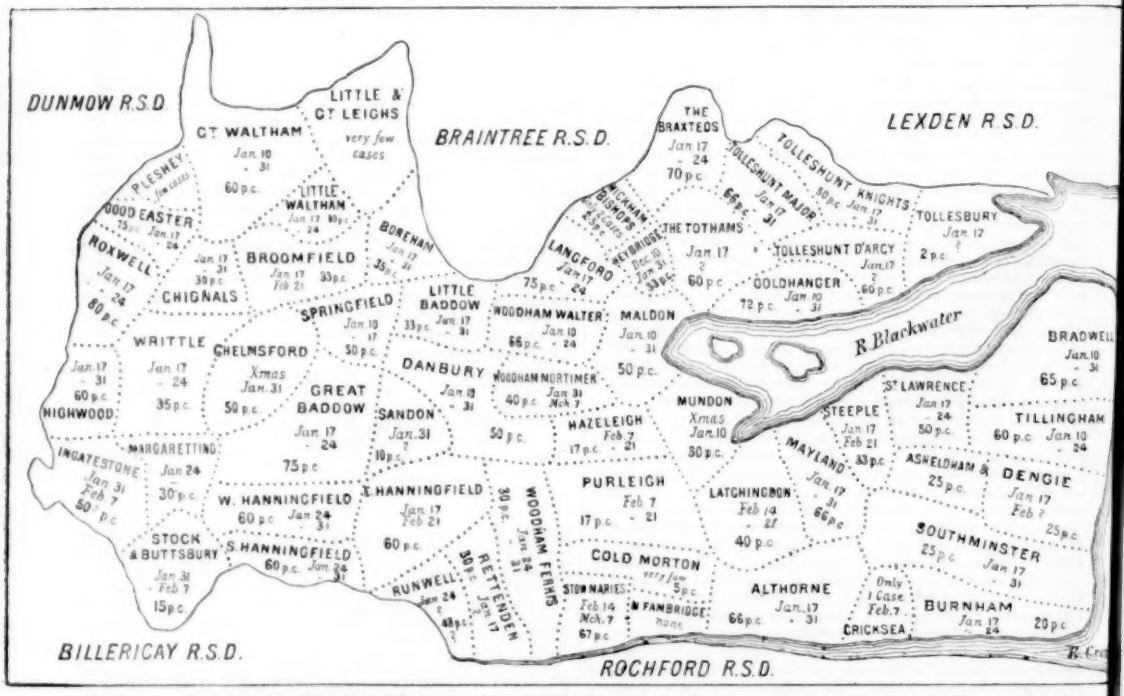
In those cases, therefore, in which the dates of the onset and acme admit of being fixed with any degree of precision we find that in by far the majority the acme was reached within a fortnight. Of the 26 in which the acme was reached within a fortnight, in 16 the outbreak occurred during the week ending Jan. 17th; whilst of the 13 in which the acme was not reached for three or more weeks, the outbreak had occurred in 9 prior to Jan. 10th. This would seem to indicate that the type of the disease in those districts in which it first made its appearance was not so virulent or infectious as in the districts which were not attacked until a week later. This is apparently confirmed by the estimate of the number of children affected, a rather large proportion obtaining in those parishes attacked during the week ending Jan. 17th than in those where the epidemic commenced a week earlier. It is especially noteworthy, however, that in nearly every case where the epidemic did not make its presence felt until after Jan. 17th, the proportion of children affected was much below the average. The proportion of children attacked during the epidemic has varied very considerably in different portions of the district. The following table is compiled from the returns furnished me by the various schools:—

Number of parishes.	Proportion of children attacked.
7	Less than 5 per cent.
4	From 5–25 ,, ,,
18	,, 25–50 ,, ,,
28	Over 50 ,, ,,

I have no doubt, whatever, that taking the district as a whole not less than 50 per cent. of the children attending the public elementary schools have suffered from the influenza. This I believe to be, if anything, a larger proportion than obtains for the adult population on the same area. As a rule, children suffer much less severely than adults, and the attendance of a medical man is but rarely requested. Headache, nausea, and feverishness, with a little aching pain, seem to have been the only symptoms in a great many of the cases, and the children have returned to school after an absence of three or four days. So far as I can gather from medical officers' reports and from the schoolmasters', relapses have not been common. The number has been variously estimated in different parts of the district at from 1 to 5 per cent., probably, therefore, 2 to 3 per cent. as an average will not be far from the mark. When the so-called relapses have occurred the symptoms were more those of a severe catarrh, with a decided tendency to run on to bronchitis and broncho-pneumonia. The relapse seemed frequently to be a more serious matter than the original attack, and recovery much more tedious. The boys', girls', and infants' departments appear to have been pretty equally attacked, although in many schools one department suffered much more severely than the others. Probably, however, taking the district as a whole, girls proved to be more susceptible than boys. Thus, in one large village only 10 per cent. of the lads were attacked, whilst nearly every girl over eight years of age contracted the disease. In another village the girls' school had to be closed for lack of scholars, whilst the attendance in the boys' school continued very good. In another of our largest villages the girls' and infants' departments had to be closed and not the boys'. At the Maldon National Schools the attendance in the infants' school fell from 81 to 21; in the girls' department from 83 to 28; whilst in the boys' department, with an average of 166, the minimum attendance was 100. Although the attendance in this boys'

CHELMSFORD AND MALDON RURAL AND URBAN SANITARY DISTRICTS.

THE EFFECT OF THE INFLUENZA EPIDEMIC UPON THE PUBLIC ELEMENTARY SCHOOLS.


DUNMOW R.S.D.
BRAINTREE R.S.D.
LEXDEN R.S.D.
BILLERICAY R.S.D.
ROCHFORD R.S.D.
LITTLE & GT LEIGHS very few cases
GT WALTHAM Jan. 10 - 31 60 p.c.
PLESHEY few cases
GOOD EASTER 75 p.c. Jan. 17 - 24
ROXWELL Jan. 17 - 24 60 p.c.
LITTLE WALTHAM Jan. 17 - 24 30 p.c.
BOREHAM Jan. 17 - 31 35 p.c.
BROOMFIELD Jan. 17 - 31 33 p.c. Jan. 17 Feb 21 33 p.c.
CHIGNALS
SPRINGFIELD Jan. 10 - 17 30 p.c.
WRITTLE Jan. 17 - 31 60 p.c. Jan. 17 - 24 35 p.c.
CHELMSFORD Xmas Jan. 31 50 p.c.
HIGHWOOD
GREAT BADDOW Jan. 17 - 24 75 p.c.
MARGARETTING Jan. 24 30 p.c.
INGATESTONE Jan. 31 Feb 7 50 p.c.
W. HANNINGFIELD 60 p.c. Jan. 24 - 31
STOCK & BUTTSBURY Jan. 31 - Feb 7 15 p.c.
S. HANNINGFIELD 60 p.c. Jan. 24 - 31
LITTLE BADDOW Jan. 17 - 31 75 p.c. Jan. 17 - 24
WOODHAM WALTER Jan. 10 - 24 66 p.c.
MALDON Jan. 10 - 31 50 p.c.
DANBURY Jan. 18 - 31 40 p.c.
WOODHAM MORTIMER Jan. 31 Mch. 7
SANDON Jan. 31 ? 10 p.c.
50 p.c.
T. HANNINGFIELD Jan. 17 Feb 21 60 p.c.
30 p.c.
WOODHAM FERRS Jan. 24 - 31
RETTENDEN Jan. 17 50 p.c.
RUNWELL Jan. 24 ? 40 p.c.
THE BRAXTEDS Jan. 17 - 24 70 p.c.
BLACKMANS BISHOPS few cases
WICKHAM BISHOPS few cases
LANGFORD Jan. 17 - 24
HEYBRIDGE Dec. 10 Jan. 31 33 p.c.
THE TOTHAMS Jan. 17 ? 60 p.c.
TOLLESHUNT MAJOR 30 p.c. Jan. 17 - 31
TOLLESHUNT KNIGHTS Jan. 17 - 31
TOLLESBURY Jan. 17 ? 2 p.c.
TOLLESHUNT D'ARCY Jan. 17 ? 60 p.c.
GOLDHANGER Jan. 10 - 31 72 p.c.
R. Blackwater
BRADWELL Jan. 10 - 31 65 p.c.
ST LAWRENCE Jan. 17 - 24 50 p.c.
STEEPLE Jan. 17 Feb 21 33 p.c.
TILLINGHAM 60 p.c. Jan. 10 - 24
MUNDON Xmas Jan. 10 30 p.c.
HAZELEIGH Feb. 7 - 21 17 p.c.
MAYLAND Jan. 17 - 31 66 p.c.
ASHELDHAM & DENGIE 25 p.c. Jan. 17 Feb 7 25 p.c.
PURLEIGH Feb. 7 - 21 17 p.c.
LATCHINGDON Feb. 14 - 21 40 p.c.
SOUTHMINSTER 25 p.c. Jan. 17 - 31
COLD NORTON very few 5 p.c.
STOW MARIES Feb. 14 Mch. 7 67 p.c.
FAMBRIDGE none
ALTHORNE Jan. 17 - 31 66 p.c.
Only 1 Case Feb. 7
BURNHAM Jan. 17 - 24 20 p.c.
CRICKSEA

The first date given in each parish is that of the week end in which the first cases of influenza are known to have occurred. The second date is that of the week end when the attendance was reduced to a minimum. The proportion per cent. of children attacked during the whole course of the epidemic is also given.

school kept up so much better than in the girls', yet in the end nearly as large a proportion of boys was attacked as girls. At the large schools in Chelmsford exactly the contrary was experienced; 60 per cent. of the 200 boys suffered, 33 per cent. of the 164 girls, and 40 per cent. of the 150 infants. At Danbury 60 per cent. of the children under nine years and only 40 per cent. of those over that age were attacked. At Latchingdon 50 per cent. of the elder children and only 30 per cent. of the infants were affected. At Runwell the influence of the epidemic was only felt by such of the elder children as came from a particular district. At Great Waltham the boys and girls suffered about equally, but the infection seemed to have spread more rapidly amongst the boys. The infants are said not to have been attacked until a week later than the elder children, but the epidemic more rapidly attained its acme here than in either of the other departments. In many schools no after-effects have been observed. Other teachers probably more observant noted "general weariness and lack of interest," "languid appearance," "chronic laxity," "pallor and low spirits," "greater susceptibility to colds," "coughs and bronchitis," "sores about face and body," &c. All the teachers with whom I have conversed assert that the children when they returned to school were very restless, and quite incapable of fixing the attention upon any subject, making teaching for some weeks a most disheartening task.

Effects upon the death-rate amongst children in the rural districts.—During the past three months the death-rate has been abnormally high, the excess being entirely due to the mortality from whooping-cough and lung affections.

Total Deaths of Children under fifteen in Chelmsford and Maldon Rural Districts for the three months ending March 31st, 1889.

	1 year and under.	1 to 5 years.	5 to 15 years.	Totals.
Whooping-cough	8	12	2	22
Croup	—	—	1	1
Diphtheria	—	1	1	2
Influenza	1	1	1	3
Bronchitis &c.	13	9	4	26
All other diseases	18	7	1	26
Totals	40	30	10	80

During the year 1889 the deaths among children were distributed as under:

	1 year and under.	1 to 5 years.	5 to 15 years.	Totals.
Zymotic diseases	19	23	4	46
Bronchitis &c.	13	11	6	30
All other diseases	72	13	10	95
Totals	104	47	20	171

That the mortality amongst children has been excessive during the past three months is obvious. The deaths from lung diseases for the quarter are almost as numerous as the total for the whole of the past year.

At the last census the proportion of children under fifteen years of age to each 1000 of population was in my districts 395, and as the total population is in round numbers 42,000 we have at last 16,000 children. Fully half of these, I believe, suffered from the influenza. As only three deaths have been attributed to the direct effect of the disease, the mortality would be about 4 per 10,000 cases. If, on the other hand, we attribute the whole of the excessive mortality to the indirect effect, the deaths would number 4·5 per 1000 cases.

In conclusion, we may ask, Do any of the facts I have recorded help us in forming an opinion as to the origin and mode of propagation of the disease? Would its dissemination by contagion only account for its appearance in twenty-five parishes in the same week? To do so we must assume a very high degree of infectivity. The rapidity with which the epidemic spread in some of the schools, causing them to be closed for lack of scholars within a week of its first appearance, might be explained on some such hypothesis; but, on the other hand, the small number of children affected in other schools in which well-marked cases occurred indicates so slight a degree of infectivity that we may well doubt whether it is at all contagious. The very varied manner in which the schools were affected by the epidemic would necessitate our also having to assume that the susceptibility of children in different localities varied in a most extraordinary manner. Whether contagious or not, how can we account for the fact that in many parishes the adults suffered so much more, both in point of numbers and in severity, than the children, whilst in the majority of districts quite as large a proportion of children were attacked? What had caused the diminished susceptibility in certain areas? At Pleshey, for instance, was it the prior epidemic of November? And was this an epidemic of the same disease as that which subsequently returned, to affect only the adult population, the children having been rendered non-susceptible by the previous visit? Is it possible that some almost universally diffused organism has, under changed conditions, the extent of that change varying in different localities, acquired more or less rapidly a disease-producing virulency which normally it does not possess? As succeeding generations increased in activity in those areas where the development was comparatively slow and gradual, the children being more susceptible, would be first affected, and the disease being mild in form and indefinite in character, would escape recognition as influenza, but possibly confer some slight degree of immunity from subsequent attack when the virus had increased in potency. In other cases where development was more rapid, the children again, as at Pleshey, might be first affected, and the symptoms be such as to indicate the closest resemblance to the fully developed disease. In such a case we should also expect the children to escape when the disease at a later period assumed a more virulent type, which is exactly what did occur. In the other districts the conditions favourable to the rapid development of the virulency of the organism existed in such a high degree that young and old became almost at the same time susceptible to its influence.

As to what the conditions above referred to are, if they exist, we are at present profoundly ignorant, but we must assume that they are abnormal and temporary; hence, after a period which may vary in different places, the organism would more or less rapidly revert to its original condition. This process of attenuation and the diminished number of susceptible individuals—diminished both on account of the decreased activity of the virus and the partial immunity conferred by an attack of the disease—would account for the gradual disappearance of the epidemic. With reference to the incubation period I dare not at present even offer an opinion. It has been asserted that, given a short incubation period and a very high degree of infectivity and susceptibility, everything in connexion with the epidemic could be accounted for. My investigations have led me to exactly the opposite conclusion. The theory I have just had the temerity to propound seems to me to explain much more satisfactorily the many varied and often apparently contradictory facts which I have observed. Whether it can as readily explain the observations of others I am not at present prepared to discuss.

Chelmsford.

THE INFLUENZA EPIDEMIC AT THE STATE CRIMINAL LUNATIC ASYLUM, BROADMOOR, BERKS.

BY REGINALD H. NOOTT, M.B. EDIN.,
ASSISTANT MEDICAL OFFICER.

THE following brief notes, contributed by permission of the Superintendent, refer to the influenza epidemic as observed among the patients, the staff, and others connected with the above institution during the first four months of the present year.

The first case was observed on Jan. 8th, the last case on May 3rd, the epidemic reaching its height about Feb. 14th. During this time 206 individuals were attacked, of whom 176 were over eighteen years of age and 30 under; of these latter 24 were under twelve years of age, and of the 176 adults 141 were males and 35 females. Of 416 male patients 74 were affected, or 17·7 per cent.; of 151 female patients 20 were affected, or 13·2 per cent.; of 84 male attendants 46 were affected, or 54·7 per cent.; of 34 female attendants 11 were affected, or 32·3 per cent. This accounts for 151 out of the total number, 206; the remaining 55 occurred in the families of members of the staff, and among those members of the staff who are not attendants. The average time during which the 46 male attendants were absent from duty was 11·2 days; the longest absence being 21 days and the shortest 6 days. It was noticeable that the length of absence from duty was in direct ratio to the age of the

patient. The average time during which the 11 female attendants were absent from duty was 12·2 days; the longest absence being 21 days and the shortest 7. The cases were on the whole simple in their character and free from complication. The onset of the attack, as a rule, was sudden, the most prominent symptoms being fever, acute frontal headache, muscular pains—which were most severe and lasted longest across the loins—great mental depression, and anorexia. The temperature ranged from 102° to 103° as a rule; in a few cases it rose to 104°. In some cases among the inmates of the asylum the mental depression was so great as to become melancholia, and in one case there resulted a condition of complete mental torpor which lasted four weeks. Two cases showed severe gastric symptoms with persistent vomiting for nearly twenty-four hours. It was noticeable that any constitutional or acquired weakness was brought out by the malady: for instance, in patients with any pneumonic weakness the bronchial catarrh was much more severe than in others; in patients subject to rheumatism the muscular pains were more severe and lasted longer; in one patient, aged sixteen, who five years previously had suffered from brain fever, there was acute delirium during the fever stage of the disease. A child aged two years and a half, who had on several previous occasions suffered from ophthalmia, developed purulent ophthalmia which gave a considerable amount of trouble. Catarrhal symptoms, more particularly discharge from the eyes and nose, were present in only a small number of cases. The general treatment adopted was the administration of diaphoretics during the early stage of the disease, followed by quinine, bark, &c., during convalescence, any special symptoms being treated on the ordinary lines.

Three cases among the inmates of the asylum had a relapse and developed pneumonia, which proved fatal in each case. The following are short notes of these cases with the post-mortem appearances.

CASE 1.—W. M——. This patient went to bed with influenza on Feb. 5th. He was allowed up in the day-room on Feb. 12th. He was sent to bed again suffering from pneumonia and pleurisy on Feb. 15th, and died on Feb. 19th. At the necropsy, the right pleura was found to be thickened throughout and covered with a thick layer of lymph. The left pleura was normal. There was no fluid in either pleural cavity. The lower lobes and lower half of the upper lobe of the right lung were consolidated, and in an advanced state of grey hepatisation. The lower lobe of the left lung was consolidated, and in a state of red hepatisation. The weight of the right lung was 55½ oz., the left lung weighing 33½ oz.

CASE 2.—P. J——. This patient went to bed with influenza on Feb. 5th. He was allowed up in the day-room on Feb. 12th. He was sent to bed, suffering from pneumonia and pleurisy, on Feb. 15th, and died on Feb. 20th. At the necropsy, the left pleura was found to be thickened throughout and covered with a thick layer of lymph. The left pleural cavity contained about 30 oz. of straw-coloured fluid. The right pleura was slightly opaque. The left lung was consolidated throughout with the exception of a small portion at the apex, and was in an advanced state of grey hepatisation. The lower two lobes of the right lung were consolidated, the lower half being in a state of grey hepatisation, the upper half showing red hepatisation, while the inflammation was just beginning to attack the lower part of the upper lobe. The right lung weighed 28½ oz., the left lung 56 oz.

CASE 3.—J. S——. This patient went to bed with influenza on Feb. 7th; he was allowed up in the day-room on Feb. 11th. The weather being mild, he was allowed out-door exercise on Feb. 18th. He had to take to his bed again suffering from pneumonia and pleurisy on Feb. 21st, and died on March 1st. At the necropsy the left pleura showed old adhesions and recent inflammation anteriorly. The left lung was consolidated throughout, and in an advanced state of grey hepatisation. The right lung was congested and œdematous; it weighed 33¾ oz.; the left 78½ oz. This last case differs somewhat from the other two, as the patient took out-door exercise on three days, whereas the other two patients did not go into the open air from the time they were first attacked; and it may here be stated that the rooms they occupied, as well as the corridors along which they had to pass to the day room, were efficiently heated with hot air, so that there was no chance of their being exposed to cold during convalescence. The pneumonia from which these three patients suffered was of a very severe type, affecting large portions of the lungs. The temperature of the patient in each case was different from the typical pneumonic temperature, being very irregular, and sometimes higher in the morning than in the evening, while a few hours previously to death it was subnormal.

These were the only fatal cases. The clinical history and post-mortem appearances in these cases support the idea that the pneumonia from which these patients suffered was different from ordinary pneumonia; that it was a pneumonia modified in some way by the presence of the influenza poison; and it seems probable that the inflammatory process is due to the extension of the action of the poison down the bronchial tubes to the air vesicles. From the fact that two of the patients did not go into the open air and were not otherwise exposed to cold, it would seem that this may take place even though the patients be placed under the most favourable circumstances, though no doubt exposure to cold would act as a predisposing cause. Four individuals had two distinct attacks, the course of the second attack being in each case exactly similar to the first, the symptoms perhaps being rather more severe.

With regard to the epidemic generally, it was noticed that it attacked adults much more than children, that as a rule the older the patient the more severe were the symptoms, that the period of convalescence was much shorter in children than in adults, and that in the case of infants the indisposition was so transient that the fact that the child had influenza at all was very likely to be overlooked. The spread of the epidemic was very irregular, isolated cases appearing suddenly in cottages and in parts of the asylum far removed from one another. The following fact also bears upon the question of infection. One of eight patients occupying a dormitory contracted influenza; a few days later another case appeared in another part of the same block. This patient was brought to the dormitory above mentioned, and one of the original occupants took his place; as other fresh cases appeared in different parts of the block they were brought down to this dormitory, until all the other former occupants had been removed to make room for them, and yet, with the exception of the first case, not one of the original occupants of the dormitory was attacked. It was the exception for more than one member of the attendants' families to be attacked, and although thirty-five of the forty-six attendants who had it were married, the wife was attacked only in five cases.

With regard to the question, "Is Influenza infectious?" the above evidence seems to support the theory that it is not *directly* infectious—that is to say, a patient suffering from influenza cannot directly infect others around him, as a patient suffering from measles can. In the case of measles, the poison multiplies in the body of the patient, and the germs of the disease become fully developed and ripe in the body; in the case of influenza, it would seem probable that, although the poison multiplies in the body of the patient (most likely in the mucous membrane of the air passages), the germs of the disease do not become ripe in the body, but are given off into the air, where they become fully developed and infective.

Broadmoor, Berks.

THE RADICAL CURE OF HERNIA.

WITH DESCRIPTION OF A NEW MODIFICATION OF MACEWEN'S OPERATION.

BY E. STANMORE BISHOP, F.R.C.S. ENG.,
HONORARY SURGEON TO THE ANCOATS HOSPITAL, MANCHESTER.

(*Concluded from p. 1170.*)

THE second class of operations are those of which Macewen may be taken as a type, and includes the procedures of Barker, Macewen, and a modification of the latter which I have devised.

In 1886 a paper, which appeared in the Annals of Surgery for that year, by Macewen, practically marked a new era in the radical cure of hernia, and introduced a new principle, which may be stated thus: The proper block to the redescent of a hernia is the entire sac, if properly treated. Almost always present, it bears a distinct relation to the size and age of the aperture through which it has been protruded. If the opening is large, so is the sac, and correspondingly tough and resistant. But, in order to obtain its legitimate effect, it must act no longer in the canal, which it will only tend to widen, acting like a wedge, driven

further and further by the concussions of coughing or the pressure brought to bear upon it by the intestines during any straining, but from within. Placed here, it completely covers and doubly strengthens the weak point in the abdominal wall, the *abdominal muscles being, indeed, converted into the spring of a natural truss, of which the pad is inside*, diverting by its projection the impact of the intestinal wave from the weak point towards others better protected. I claim for his plan that it *does* produce a better condition than the *status quo ante*, and that the man upon whom this operation has been performed is less likely to be the subject of a hernia than he was before, because he is no longer a man, so far as that opening is concerned, of patulous abdominal orifices. His operation consists essentially in freeing the sac entirely from its surroundings around the fundus, as well as up the canal, and for half an inch around the abdominal aspect of the internal ring. He then fixes firmly to the fundus a thread, which is carried through and through the sac from side to side up to the external ring. This thread is carried on through the canal to the abdominal aspect of the fascia transversalis, and there penetrates the abdominal wall about an inch above the internal ring. By passing the thread through and through the muscle, after pulling upon it so as to invaginate the plug thus formed, it is fixed, and the plug then lies inside the abdominal opening between the transversalis fascia and the outer surface of the peritoneum, in the space formed for it by freeing the peritoneum from the internal wall. The ring and canal are then closed by a suture so placed that it draws the conjoined tendon in front of Poupart's ligament, and holds it there until consolidation has been effected. Barker's operation also places a plug on the lower abdominal surface, but it is composed merely of the neck of the sac, the fundus being left *in situ* and drained. It will be seen that as a pad its powers cannot be very great, and, indeed, he does not claim, as far as I know, that it acts in this way. The canal and rings are closed by several carefully placed sutures, and the impression left by his description is that he depends mainly upon these for his results.

Now, whilst believing that the principle underlying Macewen's operation is the true one, and fully appreciating and admiring the splendid list of successes which he has placed on record, it is open to us to study his method, and to point out, if we can, any details which are capable of improvement, and any alterations by which that principle may be more perfectly carried into action. It will be noticed: 1st. That the sac must depend after operation for its vitality upon its attachments above and on either side of the internal ring, and it is evident that, for the operation to succeed, the sac must be nourished, and nourished completely. Every additional half inch of separation above must necessarily diminish the chances of that vitality, and increase the risk of a slough being shut up inside the abdominal cavity. 2nd. That, by the method described, the environment of the sac after the operation will be connective tissue, and that its connective tissue surface is opposed to this. Whilst union between connective tissue surfaces is fairly rapid, that rapidity is as nothing to the quickness with which peritoneal surfaces unite when once they are brought in contact after some slight traumatism, such as is produced by the passage of a suture. 3rd. That one of the main advantages of this method is the power possessed by the new pad of deflecting from the weakest point in the abdominal wall the impulse of the intestines against it when influenced by the concussion of a cough, or other sudden contraction of the diaphragm; that power is doubtless possessed by the pad Macewen makes, though I doubt whether the profile shown by him accurately represents the outline presented by that pad when in position, at least during the first forty-eight hours. Any arrangement which will give that pad a perfectly rounded outline in every direction from the first will more perfectly attain this indication. 4th. That by the means described of fixing the pad interiorly, it is conceivable that in less practised hands than Macewen's it might not be left perfectly covering and protecting all sides of the opening. It might be drawn rather too high or tilted slightly to one side, and then the original cause which slowly extruded the primary sac would protrude gradually another at the unguarded point, slowly pushing aside the block which should protect the whole.

It may be said that all this is but theory. In Macewen's list there is no mention of such accidents and no such return. But the operation is, after all, a new one, and it is proverbial that imitators seldom obtain as good results as the originator of any surgical manœuvre; therefore if in any way the details by which his principle—the principle for which we are entirely indebted to him—can be perfected, it should be done. In the modification which I suggest, the skin and subjacent tissues are divided by an incision which begins over the internal ring, and passes downwards over the canal, and for about one inch below the external ring; the external ring and canal are then defined, and opened by an incision through the anterior wall. The sac, being freed entirely up to, but not beyond, the internal ring, is carefully emptied, and kept empty by the finger of an assistant pressing upon the ring. Of course, if it contains adherent omentum, a small opening is made, and this is ligatured and removed, the opening being again carefully closed. A long, strong, catgut ligature, or if the hernia is particularly large more than one, is passed through each side of the sac in such a way that when both ends are pulled upon the sac is drawn up, not like a curtain, as in Macewen's case, but like a purse. The central fold formed is the largest, and each fold progressively diminishes in height on either side as it nears the external ring The neck of the sac is then invaginated, and each end of the thread carried by a needle through the canal and through the pillar of the internal ring nearest to it from within outwards. When both ends are presenting through the muscular structures they are pulled up, the sac being at the same time invaginated before the finger as the threads are drawn upon. The sac is thus turned inside out in its passage, and becomes fixed as a rounded boss exactly over the internal ring, its peritoneal surface being turned towards the intestines, and its first fold on either side being firmly applied to the peritoneum immediately within the ring. The thread ends are then tied firmly, but not tightly over the ring, which is afterwards further closed by catgut buried sutures, which are so placed as to draw the superior half of the anterior wall of the canal and internal pillar of the external ring well over and in front of the inferior half and external pillar. A horsehair drain is left in the canal, which must not be so tightly closed as to prevent free movement of the cord lying in it. The superjacent tissues are then united by horsehair sutures, and the whole dressed aseptically. It will be seen that it is impossible for the pad to lie anywhere but immediately over the internal surface of the internal ring; that the surface presented to the peritoneal investment of the intestine is also peritoneum; that each fold presents a peritoneal, and therefore quickly adhesive, surface to its fellow; that the whole pad forms, as it were, a bridge over the weak point in the abdominal wall, of which bridge the fundus of the sac forms the keystone; that the pad becomes progressively thicker and more resistant as the space covered is weakest and most in need of it, and resting as it does like an arch on the tendinous walls of the ring, it is, when consolidated—as we may expect it to become in forty-eight hours—practically incapable of dislodgment, so that the chances of return at this point are absolutely *nil*. The protection against return does not, therefore, in any way depend upon the sutures which bring the canal rings into a closed condition after the first forty-eight hours, for which time we can very safely trust either gut or silk, In cases of congenital hernia, in which we cannot depend upon a closed sac, I sew up the lower segment of the peritoneum in order to form a new tunica vaginalis, and also the lower end of the upper segment, to form a new fundus; but in passing the purse-string catgut I arrange it so that the new fundus, when reduced into the abdominal cavity does not lie, as usual, at the top of a fold presenting towards the intestine, but between two equal folds, so that it presents downwards towards the canal. It is unnecessary to say anything as to the minor points of the operation, such as dressings, drainage, &c., as these follow as a matter of course in the minds of all surgeons. Of course, everything is strictly aseptic; indeed, I believe a true radical cure of hernia has been only made possible since strict asepticism has been rigidly observed. The number of cases in which I have been able to carry out this plan are as yet too few and too recent for it to be worth while to bring them before the profession. It will be sufficient to say that so far they have all been perfectly successful. I do not suggest that this method possesses any claims to finality. Doubtless many better ones will be devised and executed; but, so far as I am able to judge, it up to the present time best carries into effect the far-reaching principle enunciated by that great pioneer of surgery, Dr. Macewen.

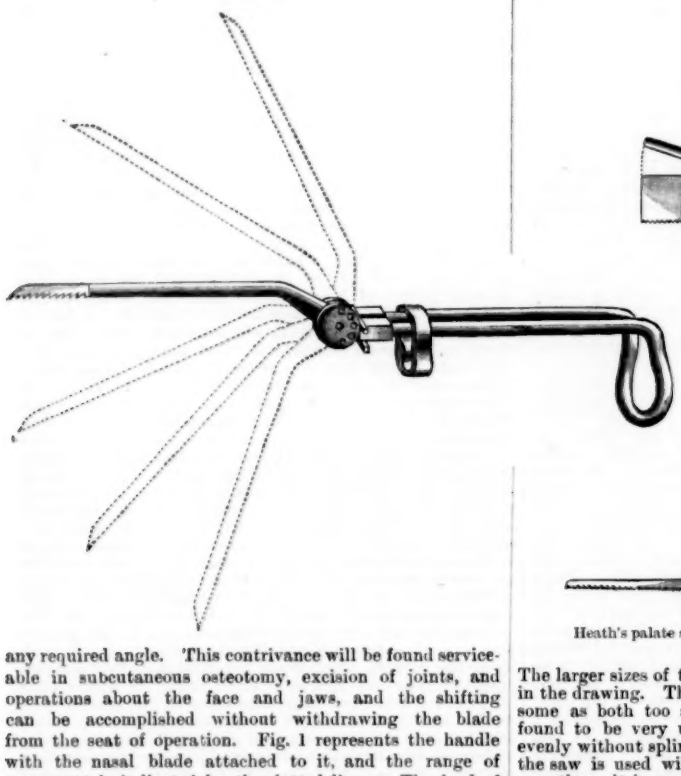
Manchester.

NEW SURGICAL SAW.

By JOHN WARD COUSINS, M.D. LOND., F.R.C.S.;
SENIOR SURGEON TO THE ROYAL PORTSMOUTH HOSPITAL AND THE PORTSMOUTH AND SOUTH HANTS EYE AND EAR INFIRMARY.

THE saw is a compound instrument consisting of special handles and many different blades. The handle is a convenient shape for holding in the hand, and is composed of steel bars, which are united at one end in a loop, and the other terminates in strong plates for fixing the blade. By the rotation of an oval collar in one direction the blade can be firmly fastened, and by reversing this movement it can be instantly released. Another special feature of the instrument is the novel method of adjusting the saw blade at

FIG. 1.



any required angle. This contrivance will be found serviceable in subcutaneous osteotomy, excision of joints, and operations about the face and jaws, and the shifting can be accomplished without withdrawing the blade from the seat of operation. Fig. 1 represents the handle with the nasal blade attached to it, and the range of movement is indicated by the dotted lines. The heel of the blade is perforated with a central hole, and also a series of holes arranged in a semicirele, for the reception of strong pins, which are attached to the plates on the handle. When it is desired to change the direction of the blade, it must first be loosened by turning the collar, and then altered to the required extent by shifting the position of the excentric pin. The nasal saw has a cutting edge of an inch and a quarter, and it is about one-eighth of an inch in depth. It is a convenient instrument for removing exostoses and osseous growths of the nasal septum and lower turbinated bone. The saw handle has been very neatly manufactured for me by Mr. John Banks, of the firm of Messrs. Maw, Son, and Thompson, in two forms, one angular and the other straight. Some of the saw blades are depicted in the engraving.

FIG. 2.

Small amputating saws, 8 in. by 1¼ in., and 8 in. by ⅝ in.

FIG. 3.

Metacarpal saw.

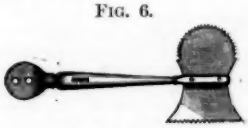
FIG. 4.

Adam's osteotomy saw.

FIG. 5.

Wood's maxillary saw.

FIG. 6.



Hey's cranial saw.

FIG. 7.

Nasal saw.

FIG. 8.

Heath's palate saw. The blade is represented as fixed in the straight handle.

The larger sizes of the amputating saws are not exhibited in the drawing. The blades (Fig. 2) will be considered by some as both too small and too light, but they will be found to be very useful instruments, and will cut very evenly without splintering. Like all other surgical tools, the saw is used with very varied skill by different hands; sometimes it is worked roughly with the full pressure of the arm, and in this way it is very easy to jag the bone and tear the periosteum. The division of the bone in amputating a limb should be commenced very gently with the heel of the saw, and the point of the thumb of the left hand should be used for steadying the blade until a groove has been fairly cut. The saw can then be worked more freely, but still with only moderate pressure. As soon as the bone is nearly severed, it must again be lightly applied and the movement slackened, so as to avoid fracture of the undivided fragment.

Few surgical instruments have undergone less change during the last half century than the saw. As a rule, surgical saws are made too large and too cumbersome. Whenever a surgical outfit includes many varieties of saws they occupy in packing a very inconvenient space. For medical officers going abroad, and for military and naval practice, my compound saw possesses many advantages.

Southsea.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

AN UNUSUAL CASE OF "RECURRENT" LYMPHO-SARCOMA.

BY HERBERT SNOW, M.D. LOND., ETC.,
SURGEON TO THE CANCER HOSPITAL.

IN respect of the site elected for reappearance the following case is probably unique. The great prolongation of life gained by operative removal of the primary lesion, and the peculiarly insidious clinical course of the secondary also render it worthy of note.

Michael V——, aged sixty-four, brass finisher, appeared at the Cancer Hospital on Sept. 21st, 1883, with a large tumour occupying the lower part of the right axilla. No family history of malignant disease; about two years previously the patient had strained his arm when at work, and two days afterwards found a small "lump" in the locality, which had since steadily increased in bulk. The growth was of the size of a cocoa-nut, of irregular shape, somewhat flattened; the skin was livid, and an enlarged gland could be felt above it; there was frequent lancinating pain. The whole was freely movable. On Oct. 2nd, 1883, the mass was removed; the neighbouring tissues proved to be extremely vascular, and free hæmorrhage took place. Microscopic examination showed the usual structure of a lympho-sarcoma; scanty reticulum; abundant small lymphoid cells with relatively large nuclei. The patient was discharged well on January 2nd, 1884, and till his recent death came up afterwards from time to time as an out-patient. No reappearance in the axilla ever took place; and, excepting the tonsil growth now to be referred to, no tumour formation in any part became evident. In 1887 the man for the first time spoke of a "lump" in his throat. It was then found that a rather pedunculated tumour, of about the size of a walnut, was growing from the left tonsil. It could not be positively ascertained when this had commenced; the patient thought there had been something there when he was operated on, but had told no one about it. He was admitted a second time; but as the new tumour appeared to have deep attachments, as it caused not the least inconvenience, and as any relation to the malignant growth excised seemed highly improbable, it was eventually decided not to interfere with it. At the end of 1887 suppuration took place in the middle, seemingly dividing the mass into two halves, which cicatrised over and remained, to all appearance, stationary in size until July, 1889. A sudden and marked increase in bulk then ensued, and an ulcerated mass, two inches and a half in diameter, was found (on one of the patient's visits) filling up the fauces. Most of the ulcerated surface, however, again cicatrised over. On Sept. 16th, 1889, the following note was made: "General health good; tumour apparently stationary, of three inches in diameter, flattened, slightly concave on surface, pushing uvula to right side." On Jan. 13th, 1890, the health was evidently failing, and the deep cervical lymph glands became enlarged. The patient died suddenly in the night (a few days after visiting the hospital) on April 17th, 1890. A complete examination was not permitted, but portions of the pharyngeal growth were removed, and identity of structure with the primary neoplasm was proved by the microscope.

Gloucester-place, W.

ALOPECIA AREATA FOLLOWING INFLUENZA.

BY C. F. WILLIAMSON, L.R.C.P. LOND., &c.

THE following interesting case came under my care lately, and, not having seen alopecia mentioned anywhere as a sequela of influenza, I thought the following account would be of some interest.

Mrs. R—— a widow, aged thirty-five, had an attack of influenza during the last week of January this year. All her children (seven in number) were affected at the same time. She complained of great pain over both the eyes and at the back of the head, the former pain being most acute over the course of the supra-orbital nerves, and the latter over that of the occipital. At the end of a week she was able to resume her household duties, although the headache continued. In the middle of March she had another attack of influenza, complaining of the same kind of headache. This attack lasted only a week. I lost sight of her then till the beginning of May, when she came suffering from headache and gradual loss of hair. The headache had continued from the first attack in the same situations, and been most acute, but the loss of hair had only commenced after the last attack. On examination, there was baldness in patches over the courses of the supra-orbital and occipital nerves, and the skin was very tender to the touch. Each patch exhibited the usual characteristic signs of alopecia areata. There were no grey hairs, nor had the hair turned grey before it perished. She had no loss of hair on any other part of the body, nor were the children affected in a similar way. For the headache an ounce of the following mixture was ordered to be taken every four hours: Chloride of ammonium, three drachms; water to six ounces. For external application: Tincture of cantharides, two drachms; strong solution of ammonium, four drachms; water to six ounces; to be rubbed in every night and morning. In a few days she had entirely lost all pain in the head, and now, after the lapse of two weeks the hair has begun to grow.

Horley, Surrey.

REDUCTION OF A DISLOCATION OF THE HIP-JOINT AFTER FOUR MONTHS' DURATION.

BY W. ALEX. MACKAY, M.D., F.R.C.S. EDIN.

RAMON D——, aged thirty-three, while working in a mine on May 13th, 1889, had his right thigh dislocated. A large quantity of earth and a mass of rock slid down and nearly buried him. The rock had to be broken up before it could be removed from his leg. I saw the patient for the first time on Sept. 22nd, four months and nine days after his accident. He told me that several ineffectual attempts at reduction had been made. The position of the limb was in every respect characteristic of dislocation on to the dorsum ilii. The head of the bone could be distinctly felt through the atrophied muscles. There was slight œdema of the leg below the knee. Placing the patient under an anæsthetic, I attempted reduction by the usual manipulation, but failed in the first attempt. I then flexed the leg again, abducted very forcibly till it seemed as if the head of the bone was almost about to pass on to the pubis. Rotation outward and steady extension now produced a crunching sensation, and the head of the femur passed into the acetabulum. He was kept in bed for a fortnight with a long splint applied. I saw him several months later, and he was walking well and gaining strength in his atrophied muscles.

Huelva, Spain.

SPONTANEOUS VERSION IN ARM PRESENTATION.

BY R. C. BENNETT,
GOVERNMENT MEDICAL OFFICER, TRINIDAD.

AS cases of "spontaneous version" in "arm presentations" are of rare occurrence, I submit a brief account of the following.

On April 1st, 1890, I attended a Coolie woman, aged twenty-six, a primipara, in whom eight hours after the first indications of commencing labour an arm came down. On examination the left arm was found protruding through the vagina, together with the umbilical cord, in which there was some faint pulsation. The head lay in the right iliac fossa. The presentation was dorso-anterior; uterine pains frequent and strong. The arm and cord were replaced during the interval of pains, and were retained so long as supported in that position, but came down on removing my hand. Efforts to get the head to engage having failed, attempts were made to turn, but the uterine contractions were so strong and the parts so tightly jammed that it was impossible to get at a leg. The patient was very troublesome and her surroundings most unfavourable. The cord at this stage ceased to pulsate. After remaining two hours with the patient, and failing to get head or breech to engage, the assistance of a neighbouring district medical officer was sought, with the object of removing the fœtus by operative

means. Before, however, the necessary arrangements could be made spontaneous version took place, the breech engaged and the fœtus was expelled, together with the placenta, twelve hours after the first indications of commencing labour and six hours after the arm and cord had come down. Although I do not think that operative measures for removal of the dead fœtus were too hastily decided, still the case would seem to teach one not to resort to instruments in these cases too hurriedly, but give nature a fair chance, all things being of course duly considered. It is stated that few authenticated cases are recorded in which spontaneous version has occurred after the arm (shoulder) has become engaged, &c. It would not be unreasonable to assign the cause of the presentation here recorded to a low attachment of the placenta to the inferior segment of the uterine cavity. The prolapse of the umbilical cord would strengthen this supposition.

Trinidad.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

STRANGULATED FEMORAL HERNIA; GANGRENE OF THE GUT AND EXTRAVASATION OF FÆCES INTO THE PERITONEUM; HERNIOTOMY; SUBSEQUENT ABDOMINAL SECTION; FLUSHING OF THE PERITONEAL CAVITY; DEATH FROM PNEUMONIA; NO PERITONITIS; REMARKS.

(Under the care of Mr. BRUCE CLARKE.)

THIS is an interesting case of rupture of the intestinal wall after sloughing due to strangulation of unknown duration, and illustrates the treatment now considered best in such cases. An artificial anus was made by suturing the damaged gut to the abdominal wound. Experience has shown that immediate resection of the gangrenous bowel does not give the favourable results obtained after creation of an artificial anus and subsequent resection. It also illustrates the fact that the escape of the contents of the small intestine into the peritoneal cavity is not necessarily productive of a septic peritonitis when means are immediately adopted to cleanse the contaminated surfaces, and prevent further escape. It is hardly possible to say how long this fluid may remain in the peritoneal cavity after a rupture of the intestine due to traumatism without producing harm; but the surgeon hardly ever has the opportunity of cleansing the peritoneum of fluid which has escaped from a rent of the intestinal wall before acute peritonitis of a septic character has become pronounced and indicates the urgency of the case.

Two days before admission the patient stated that she had strained herself. Since that time she had noticed a lump in the groin. On cross-questioning her, she seemed doubtful as to whether the lump might not have been there longer, and there seemed some probability that this might be the case, as there was a vaginal discharge. She had been sick during the last two days, vomiting some greenish bilious-looking fluid, and the bowels had not been opened, nor did it appear that any flatus had passed. No purgatives had been administered, and but little food had been taken since the commencement of the trouble.

The patient was admitted on Jan. 9th, 1890. Her general condition was not bad, though she was a little feeble and somewhat hysterical. There was a very evident swelling in the groin, which was red and œdematous on the surface, and had all the appearance of an abscess.

Jan. 9th.—1 A.M.: An incision was made over the swelling and some stinking pus was evacuated. At the bottom of the abscess was some fat, which had all the appearance of a piece of mesentery or omentum. With a view to determine more accurately the origin of this fat the wound was enlarged, and it was then clear that the fat was issuing from the femoral ring. Hoping that perhaps it was only a piece of strangulated omentum, and that the gut itself was not involved, and having regard also to the fact that if further steps were then taken it would be difficult to avoid fouling the peritoneum, the patient was sent back to bed.

On the following afternoon—i.e., about thirteen hours after the first operation—as the vomiting had rather increased than diminished, and the general condition of the patient had not improved, she was again placed under the influence of an anæsthetic, and an incision was made on the outer border of the rectus on the same side. After the peritoneal cavity had been opened, the hand was introduced, with a view of ascertaining the exact condition of things. No sooner, however, was the region of the femoral ring reached than the intestine gave way, and became entirely separated from the ring, flooding the peritoneal cavity with liquid fæces. Probably half a pint found its way into the peritoneum. The ruptured intestine was at once seized and brought out through the abdominal wound, and was temporarily clamped. The peritoneum was thoroughly flushed with plenty of hot water containing a little boracic acid, and thoroughly irrigated until the water came out quite clear. The edges of the open intestine were then fixed in the abdominal wound, and a glass drainage-tube enveloped at its outer extremity with rubber sheeting, which contained a sponge, was inserted into the femoral ring. As the gut seemed to have emptied itself pretty completely, and there was but little distension of the intestines above the strangulated portion, a piece of wool was placed in the open mouth of the intestine, with a view to give the peritoneal surfaces time to adhere together before much fæcal matter issued from the intestine. When the patient was removed to bed she was somewhat collapsed, and the pulse was feeble, 104. By midnight she was slightly improved, but the pulse was 120. The sponge was changed, and about an ounce and a half of fluid was taken from the peritoneal cavity. It emitted a fæcal odour.

10th.—She seems better, and has slept at intervals during the night. She has taken some milk-and-water, and was able to pass her urine without the aid of a catheter. The sponges which block the drainage-tube have been changed four times during the night, and about six ounces of fluid in all have escaped from the tube. The abdomen is less distended and less painful to the touch. Pulse 120; respiration varies from 30 to 40. Later on in the day she became a little restless, and pulled off her bandages. She retched several times, but this abated after nutrient enemata were administered in place of the food.

11th.—Had a good night after morphia. With the exception of restlessness she was decidedly better. Scarcely any fluid comes by the drainage-tube, and what there is, is quite sweet and clear. No fæces or flatus has passed from the abdominal wound, and the abdomen is a little more distended. A catheter was passed into the wound, and some brown liquid fæces escaped and continued to escape on withdrawing it. A medium-sized drainage-tube was then passed some three or four inches up the intestine and left there. The dressings on the lower wound were carefully protected from contact with the fæcal matter that was issuing from the upper. Later on in the day a good deal of liquid fæces and flatus escaped, and she was much relieved, and took her food with much more relish.

12th.—There has been very little discharge of fluid from the peritoneal drain. Has passed rather a restless night. Temperature 100°; pulse 132, soft and feeble. Passes urine easily, and complains of no pain. Has taken a considerable amount of nourishment, and asks for food. Enemata discontinued. There is now a free passage of fæcal matter from the intestine. The abdomen is not at all distended, and there is no pain. The peritoneal drainage-tube was removed, and the opening closed with a plug of sal alembroth gauze.

13th.—Slept better. Pulse weak, 120. Artificial anus wound looks more healthy. All the stitches removed. A slough came away from the end of the protruding intestine. Fæces more solid.

18th.—During the last three days there has been steady improvement in every respect. The patient has taken her food well, and seems much stronger. This morning, however, she does not appear to be so well. Complains of pain in her head and over her eyes. Respiration, laboured, 44. Does not complain of any actual pain in the chest. Chest moves more freely on the right side. No cardiac murmur. There appears, however, to be some pleural friction on the right side, and some harsh breathing. Back not examined;

she appeared to be too ill to sit up. The wound does not look so healthy; several sloughs have separated. There is no sign of abdominal tenderness. After this the patient became gradually weaker, could with difficulty be persuaded to take food, and the laboured breathing increased. She died four days later.

Necropsy.—There was a large patch of croupous pneumonia at the left base, and general broncho-pneumonia, with some pleurisy. The right lung was normal. In the abdomen there was no sign of peritonitis. A piece of ileum about twelve inches from the ileo-cæcal valve was firmly adherent to the abdominal wound. The femoral ring on the right side, through which the piece of strangulated intestine had descended, was completely closed, and there was no piece of intestine or omentum adherent to it.

Remarks by Mr. BRUCE CLARKE.—This case affords a good illustration of the value of flushing out the peritoneum, and of the completeness with which it can be effected when so large an amount of fæcal matter has been poured into it, as well as of the possibility of dealing successfully with so serious an accident as rupture of the intestine during the course of an operation for strangulated hernia. Had not an attack of pneumonia supervened, there seems every probability that complete recovery would have taken place.

EYE AND EAR HOSPITAL, BALTIMORE, U.S.A.

THE TREATMENT AFTER CATARACT OPERATIONS.

(Under the care of Dr. JULIAN J. CHISOLM.)

THIS account of a method of treatment after the operation for cataract cannot fail to be of interest to our readers, differing as it does from that employed in this country.

This hospital was opened for the treatment of patients twelve years since. During this period 1050 cataract operations have been performed. Up to 1886 there was nothing special in the treatment differing from that pursued elsewhere. The patients were treated in dark rooms, with both eyes heavily bandaged, and were confined to bed with the usual bodily restraints in such general use. Four years ago modifications in the after-treatment were introduced, until now the course so successfully carried out is altogether different from that pursued in most special hospitals. The first absolute change is that the eyes are no longer bandaged, and only one eye is closed. Notwithstanding the many arguments on the subject, it is found by experience, in upwards of 400 cataract extractions, that the use of the uncovered eye does not interfere with the thorough and rapid healing of the cut cornea of the eye operated upon. The patient is, therefore, allowed to enjoy the great comfort of using this eye as he did prior to the operation. If the movements of this eye, when put to its ordinary duties, did not disturb the healing process in the cornea of the other, then the use of the arms and legs should not do so. Experience has shown this to be a natural and safe conclusion. It has done away with all bodily restraints and bed treatment. Simultaneously with the liberty allowed to patients was the admission of more light into the sick chamber. Instead of closed shutters, an ordinary window shade, to exclude sunlight, is found by far the better for the patient, to say nothing about the comfort to the attendants. All of these radical changes in the after-treatment of cataract cases had been brought about from the adoption of a simple dressing for the eye operated upon. It consists of a piece of soft silk isinglass adhesive plaster an inch and a half long and one inch wide. After the operation for cataract extraction is completed, now without iridectomy, a ½ per cent. solution of eserine is instilled, and both eyes are closed. The adhesive strip is put over the closed lids of the eye operated upon, its length extending from just under the brow to the cheek. It is made damp by a few drops of water, and in its limp condition, aided by a few strokes of a shell spoon, it adapts itself perfectly to the irregularities of the lid surface, fixing every lash down upon the cheek. Being an inch wide, it leaves exposed the angles of the lids, permitting the escape of secretions, and also allowing some drops of eserine to be instilled at bedtime. The plaster is diaphanous, so that the condition of the lids can be determined at the daily visits, without disturbing the adhesive dressing. When the adhesive strip dries, which it does in a few minutes, by its firm hold it has converted the two lids into one continuous septum, a natural mould over the wounded eyeball, supporting and sustaining the perfect adjustment of the lips of the corneal wound as no other dressing can. The other eye can now be opened for use without fear of disturbing the one that is shut in. An every-day familiarity has established so much confidence in the efficacy of this dressing that the patient is literally turned loose to follow out pretty much his own inclinations. He walks unaided from the operating-room and his chamber. He lies on the bed or sits up according to his own wishes. He goes to bed when the proper time comes, making his own toilet, unaided by the attendants. He partakes of the regular solid meals of the hospital diet table. He walks and talks at will, using the uncovered eye as he did prior to the operation. By the fifth day, and sometimes on the fourth, the strip of plaster applied at the time of operation is removed, and after that the eye is left uncovered. A few drops of a 1 per cent. solution of atropia are daily instilled to break up any adhesions which may have formed between the iris and the capsule of the lens. Smoked glasses and brow shades are not now used in the hospital since the abandoning of dark rooms. Most frequently, when patients are discharged from the hospital on the fourteenth day after operation, they go out into the street without protection, smoked glasses being seldom required. The experience of the past four years in this hospital has conclusively shown that most of the sensitiveness of eyes operated upon for cataract is caused by the exclusion of light and the treatment in dark rooms. Healthy eyes submitted to this confining treatment will show the same weeping when the bandages are removed as those operated upon. Since abandoning dark rooms and confining compresses red weeping eyes are rarely seen in the hospital wards. The great success of this non-restraining treatment is well shown in the fact that last year out of 116 cataract extractions, made as patients applied for operation in every varied condition of general health, only two eyes were lost. Such good results were not secured at the hospital in former years when the most careful restraining treatment was carefully carried out.

Medical Societies.

EPIDEMIOLOGICAL SOCIETY.

Enteric Fever in India.

AT an ordinary meeting held on May 14th, Sir Thomas Crawford, K.C.B., M.D., President, in the chair,

Surgeon-Major R. PRINGLE, M.D., read a paper on Enteric Fever in India, treating successively of (1) its increase, (2) the causes of this increase, (3) the remedies, and (4) the probable consequences. The first question to be decided was, he said, whether this increase were real or apparent—i.e., due to the incorrect diagnosis and nomenclature of cases of malarial fever, occurring for the most part among young soldiers recently arrived, imprudent or intemperate, and remittent fevers assuming a continued type. This last was, indeed, the conclusion of the Sanitary Commissioners, but it reflected gravely on the knowledge and ability of medical officers of great experience at large military stations, and could not be allowed to pass unchallenged, especially since the lay press, adopting the views of the Commissioners, had expressed itself very strongly on the supposed incompetence, negligence, or worse, of the medical service generally. Thus the *Pioneer*, in an article entitled "The Confusion of Fevers," commenting on the fact that in the garrisons at Meerut and Lucknow, of equal strength, there were last year fifty and fifty-one cases of fever respectively, with five deaths at each place, but that while the whole at the former, only thirteen at the latter were returned as enteric, assuming that the conditions were identical, charged the medical officers with "inventing enteric cases out of their own imaginations," whereas this proportion of malarial and enteric cases was precisely what anyone acquainted with the very different sanitary conditions of the two places would expect. The increase of enteric fever was, he maintained, real and indisputable, and its cause to be found in the almost universally polluted water-supply. Young men, indeed, were there, as here, more susceptible to enteric fever; but to assign youth as the cause was as irrational as it would be to do so were a number of unvaccinated infants, exposed to small-pox, to contract that disease. The water-supply

in most places was execrable; yet, in spite of warnings and remonstrances, little or nothing had been done to improve it, though the conditions of the disposal of excreta were such as to render them hotbeds of fever should the disease be once introduced. Thus, at the important sanatorium of Mussooree, he had represented this in vain for many years; in 1865 he saw the first case of enteric fever, and in the following year his predictions were more than realised; but it was not till 1883 that, as an elected member of the municipality, and with no encouragement from the Government, he was able to obtain a water-supply unequalled in any other Indian town, and that without any addition to the local taxation. The station selected to exhibit the other side of this picture was the Military Hill Sanatorium of Chuckrata, about forty miles from Mussooree, which was cold and bleak, and without anything to recommend it except a magnificent water-supply 1000 feet above the station; but, incredible as it might appear, this had been neglected, and the water was carried by hand from a tank below the barracks, without any pretence at purification, though it received the surface drainage, excreta, and filth from the dwellings above. Even an alarming outbreak of fever in 1888 had not induced the authorities to avail themselves of the absolutely pure water-supply close at hand, or even to collect the rain-water from the iron roof, which was now wasted. During the twenty years that he had been sanitary officer in the Agra district he had maintained a constant supervision of the roadside wells, and his example had been followed by others, with the happiest results; but the matter had never been taken up in earnest by the Government, and it was most unsatisfactory to read that outbreaks of enteric fever at Meerut, Fyzabad, and other places "could not be attributed to any local conditions," or that "the causes were unascertained," when they must have been evident to the veriest tiro in practical sanitation. It had been urged by those who refused to recognise in foul-water supplies the chief factor in the propagation of the disease that the natives themselves, who had no others, did not suffer from enteric fever. He admitted that they might be less susceptible than Europeans, but the diagnosis was very difficult with them, their complexion rendering all exanthemata obscure, and they succumbed early to fever before any obvious lesions could be developed; but he had seen them die by thousands of an epidemic fever, probably enteric, since the characteristics of all others were wanting. Thus, in 1879, out of a population of four millions in the districts of Meerut, Aligarh, Etah, and Bulandshahr, half a million perished, while miscarriages were so numerous among women as seriously to affect the birth-rate. The remedies, he insisted, were obvious—viz., the provision of pure water-supplies from mountain streams or deep wells at all military stations, with strict control of the wells and tanks used by the native population, and more attention to general sanitation. The examples of Chuckrata and Roorkee, once one of the healthiest stations in the North-West provinces, on the one hand, and of Mussooree since 1883 and Calcutta since 1870 on the other, were absolutely conclusive; while the almost complete immunity enjoyed by the children in the schools at Mussooree showed that youth *per se* was not a cause of enteric fever. When suspicious sources could not be avoided, as by soldiers on the march, the water should be boiled. The consequences of this persistent apathy and neglect to provide pure water had been that one "sanatorium" after another had become a focus of fever. Murree presented one of the most recent and terrible examples, and the annual loss of life among a soldiery better and more costly than ever would far outweigh any expenditure which prevention for all time could possibly involve.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

MAY 9TH.

MR. H. ARMSTRONG, PRESIDENT, IN THE CHAIR.

Plumbism and Water-supply.—Mr. JOHN BROWN, of Bacup, read a paper on this subject, in which he called attention to the fact that while in London cases of plumbism were almost invariably consequent on working in lead, and ill effects were rarely if ever seen to follow the use of that metal for service pipes and cisterns, it was quite otherwise in Yorkshire, where in towns supplied with moorland water lead poisoning was of very frequent occurrence, assuming at times an epidemic character. Many deaths formerly, and even now, certified as due to uræmic convulsions, epilepsy, meningitis, &c., were, he believed, incorrectly diagnosed. Thus, in a small block of houses four such had been returned within a few months; he found a number of cases of lead palsy, and the water highly charged with lead. The water in these places was very soft, of but 2° or 3° of hardness, with little organic matter or chlorine, highly aerated, and had always an acid reaction, due in some instances perhaps to sulphuric acid, but mostly, he believed, to some organic acid. At Bacup and Sheffield the water contained also much iron derived from the pyrites, to which Mr. Allen attributed the presence of the sulphuric acid, which he was rather inclined to explain by the oxidation of the sulphurous acid in the air. From numerous experiments, which he described with much minuteness, he had come to the conclusion that the chief agent in the solution of the lead was not the acids, but the oxygen. Thus plumbism was far more frequent in winter, when the temperature of the moorland surface water was not over 40° F., than in summer, when, having, unlike spring water, the same temperature as the air, its power of holding gases in solution was less. Delivery under pressure, especially when interrupted, favoured aeration, and was followed by lead poisoning. The reservoirs were not stocked with fish, as was always done when water was drawn from rivers containing sewage, and when, notwithstanding the quantity of organic matter in it, it had little or no action on lead pipes. These facts, too, completely disproved Mr. Power's notion that bacteria played a part in the solution of lead, for moorland water, especially in winter, was remarkably free from such organisms. Lead occurred in water as a hydrate in solution and a carbonate in suspension. The presence of iron or of lime increased, while that of alkaline or earthy carbonates diminished, its solvent power. Passed through carbon filters, which absorbed sometimes as much as six-sevenths of the oxygen, moorland water ceased to act on lead. Borings into the millstone grit yielded abundance of water containing perhaps not more than one-sixteenth of the oxygen in that from the moors, and was perfectly safe; but if the moorland water were used at all it should, he maintained, be filtered through carbon, or at least through "sandrock," and the reservoirs be stocked with fish.—Mr. WYNTER BLYTH expressed his belief that the organic acid in question was acetic, and Mr. CASSAL maintained that the oxidation of sulphides was a well-known fact, both speakers criticising the chemical procedures and conclusions of the author.—Dr. CORFIELD said that he had had a large experience of the waters of the Hasting sands, soft and acid, and containing a bicarbonate of iron. They dissolved iron, lead, zinc, and tin with surprising rapidity, compelling him to have recourse to slate or stoneware for cisterns, and to wrought-iron pipes coated while fresh from the foundry with Dr. Angus Smith's varnish. He believed that the chemically pure lead, now imported from silver-yielding countries cheaper than the impure metal produced at home, was more easily dissolved by both acid and oxygen, though he attached more importance to the acid.

Photographic Camera.—Dr. SYKES exhibited a new form of the "kodak" photographic camera, which he believed would be very useful to medical officers of health in representing the actual state of insanitary premises. Besides the perfection of its mechanism, it presented an entirely new feature in the substitution for glass plates as a vehicle for the bromide of silver film of a flexible sheet wound off one spool on to another. Fifty larger or a hundred smaller pictures could then be taken in rapid succession without once opening the camera; while for those whose time was otherwise engaged the company would undertake the developing, printing, and mounting at a moderate charge.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

The Urticaria of Infancy and Childhood.—Hay Fever and Paroxysmal Sneezing.—Heart Hurry.

A MEETING was held on May 2nd, H. Campbell Pope, M.D., in the chair.

Dr. COLCOTT FOX read a paper on Urticaria of Infancy. He contended that, considering the great frequency of the affection in this country, the subject received a totally inadequate exposition in the text-books. He held that the affection was not to be regarded as a concurrence of two

diseases, an inflammatory papular one and an urticaria, nor as essentially a prurigo with some secondary wheals, but that it was an urticaria, and the urticaria of infancy and early childhood. The special feature of this urticaria was that, on account of the ready response to any irritation on the part of an infant's skin, an inflammatory papule was developed in each wheal, and was left on the subsidence of the wheal. Though this complicating inflammatory lesion was usually papular, it was sometimes vesicular, pustular, or bullous, and occasionally these several phases could be seen in the course of a single case. The affection had no direct relation with vaccinia, varicella, measles, or scarlatina. Dr. FOX then discussed the etiology of the affection, the diagnosis from scabies, varicella, and prurigo, and the treatment.—Dr. ABRAHAM thought there was always the question whether the disease was a primary or a secondary lesion, and that insects were often responsible for the urticaria. He found a tar bath for about ten minutes the best thing to allay the irritation.—The PRESIDENT said these cases depended upon a combination of circumstances, one of which was gastro-intestinal irritation. He thought children were benefited by chicken or veal broth and Dr. Cheadle's gluten food. Magnesia was more useful even than bismuth and applications of tar.—Dr. POTTER had never seen eczema associated with scabies, unless there were some external irritant.—Mr. KEETLEY had seen a case of urticaria associated with abscess, which got well on opening the abscess, and he attributed it to a possible septic cause.—Dr. DREWITT backed up the treatment by large doses of quinine. He thought mercury useful in specific cases.—Dr. FOX replied that he thought in such cases as that mentioned by Mr. Keetley the urticaria was due to vaso-motor changes, and not to septic ones. Any ailment which the patient has should be cured, and the special treatment of the affection should be seen to.

Dr. SCANES SPICER then introduced the subject of the Local Treatment of Hay Fever and Paroxysmal Sneezing. He pointed out that the symptoms of hay fever are pre-eminently perversions or exaggerations of the normal nasal reflexes *plus* signs of nasal irritation. This being so, careful examination of the nose and naso-pharynx was an essential preliminary to the intelligent treatment of any given case. Careful examination disclosed hyperæmia, with hyperæsthesia, either diffuse or in localised patches, and associated or not with gross structural deformities &c. of the nasal passages. The relation of these hyperæsthetic areas to the external irritant on the one hand, and to the involved nerve centres (probably bulbar) on the other, were considered, and the various ways in which it might be sought to arrest the disease indicated. The general and local treatment of hay fever was then considered, and the advantages pointed out of the medicated nasal cylinders which the author had devised, in that (1) they permitted free nasal respiration during use, (2) they could not slip back into the pharynx during sleep, and (3) they caused the affected tract to be soothed and bathed by the medicament for many successive hours. Local treatment, more especially by the galvano-cautery, calculated to modify the peripheral hyperæsthetic area, so that they no longer conveyed undue stimuli to the nerve centres, had been of late attended by the most favourable results in the practice of the author and of many others.

Dr. A. S. EALES read a paper on Paroxysmal Heart Hurry associated with Floating Kidney. The author's experience of paroxysmal heart hurry had been confined to cases of more or less gravity, wherein there had been distinct disease of one or other of the abdominal organs in both sexes, or serious functional disturbance of the pelvic organs in females. At the risk of appearing to argue *post hoc propter hoc*, the coincidence of extreme rapidity of the heart's action with floating kidney (four cases), dilatation of the stomach (two cases), and profuse menorrhagia at the menopause (two cases), had induced him, in default of pathological evidence to the contrary, to regard prolonged irritation of the abdominal sympathetic, either continuous or intermittent, as a probable cause of paroxysmal tachycardia resulting from reflex inhibition of the vagus or stimulation of fatigue of the vagus centre, or from the reference of irritation of the sympathetic periphery in the abdomen to the cardiac accelerator fibres of the sympathetic, in the same fashion as may frequently be noticed in regard to cerebro-spinal nerves of sensation. Four cases of floating kidney were cited in which the occurrence of tachycardia appeared to be synchronous with some change of position which would produce dragging of the renal nerves. In one very remarkable case, pain in the epigastrium, groin, and down the thigh, with albumen and casts in the urine, occurred only during a paroxysm of heart hurry; the patient had suffered from intermittent tachycardia almost all her life, stooping, going up and down stairs, and advanced pregnancy being the conditions which had at different times apparently produced the paroxysmal tachycardia. The existence of floating kidney was diagnosed by the author shortly before the death of the patient, which occurred after nearly four weeks of persistent heart hurry, during which the pulse had been counted by another physician who saw the case at 245 beats per minute. Until the later attacks this patient could always "steady the heart," and sometimes arrest a paroxysm, by lying on the left side, raising the right arm above the head, and forcibly flexing the right thigh on the abdomen—a posture pointed out by the author as precisely that which would most readily favour auto-reposition of the right kidney, the one displaced in this case.—Dr. SEYMOUR TAYLOR contended that this was a contribution to a subject of much wider basis. He was convinced of the frequent association between lesions of the abdominal viscera and so-called functional disorders of the heart. In some cases, where the primary lesion was removed, subsequent restoration of the heart's action occurred. It seemed as though each segment of the body was influenced by some disturbance in a neighbouring or distant relative, owing to the intimate relation of the parts. The true balance between waste and repair might be upset in most vital organs by over-stimulation from injury or disease in some other.

Pathological specimens were exhibited by Mr. H. P. Dunn. Mr. Lloyd showed an entire Membranous Cast from a Uterus.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Specimens.—Diagnosis of Gonorrhœal Infection in Women.

A MEETING of this Society was held at Leeds on April 18th, John Wallace, M.D., President, in the chair.

Dr. ALEXANDER (Liverpool) showed a Ruptured Uterus; the patient had been in labour twenty-four hours, and ergot had been given. Dr. Alexander found the child hydrocephalic, turned, and applied forceps to the after-coming head; the placenta was expressed, when a mass of intestines came down. The uterus was removed and the stump drawn down through the vagina. The patient made a good recovery.—Dr. WALLACE was always glad to hear of new methods, and had often thought that in some cases the method of bringing the stump down through the vagina would be useful.

Dr. CLARK (Huddersfield) showed a Uterus removed for Carcinoma.

Dr. BRIGGS (Liverpool) mentioned a case of Chronic Inversion, and exhibited the uterus.

Dr. LAUDER (Manchester) read a note on a case of Peritonitis complicating Pregnancy. Dr. Sinclair also spoke on the case.

Mr. MAYO ROBSON (Leeds) showed a Uterus surrounded by Abscesses, removed by Hysterectomy. It was a case of fibroid tumour of uterus, with double pyosalpinx, accompanied by one or more abscesses in the broad ligament, communicating with an abscess cavity in the centre of the myoma. The case shows that, even in the presence of extensive pelvic suppuration, abdominal hysterectomy may be successfully performed. She had been married eight months, and, as far as she knew, was quite well up to three weeks before admission to hospital, when severe pain compelled her to give up her work and seek advice, when an abdominal tumour was discovered. The tumour enlarged so rapidly, accompanied by such severe pain and serious ill-health, that it was decided to operate at once. On admission at the infirmary a solid tumour was found, occupying the lower part of the abdomen, reaching as high as the level of the umbilicus, manifestly uterine, and probably myoma; behind the uterus, filling up Douglas's pouch, was another enlargement, less solid, apparently attached to the back of the solid tumour, the uterus itself being pushed above the pubes, almost out of reach of the finger in the vagina. The temperature before operation ranged from 100° to 103°, the pulse was persistently over 110, and she had a bad systolic bruit. The operation was performed on March 24th. On opening the abdomen the edges of the wound gaped widely,

and a myomatous tumour came into view, which could not be brought forward until the incision had been prolonged two inches above umbilicus, and was found surrounded by adhesions at the side and posteriorly. A fluctuating swelling immediately behind the uterus was aspirated, about a pint and a half of offensive pus being removed. The adhesions on the right side were separated without much difficulty, but on the left the sigmoid flexure of the colon was so adherent that it had to be dissected off several inches, and between it and the uterus another abscess was found and evacuated. The Fallopian tubes, filled with pus, were then peeled off the intestines and other parts to which they adhered, and an elastic tourniquet was placed around the base of the tumour until the mass was sufficiently isolated for the application of a Koeberlé's serre-nœud. The pelvis was then washed thoroughly out with plain boiled water, in order to check the oozing, which was rather free. The parietal peritoneum was then applied closely over the visceral peritoneum, below the wire of the serre-nœud, and fixed by two silk sutures, a drainage-tube was inserted posteriorly, and the wound closed in the usual way. The pedicle was trimmed and painted with tincture of benzoin in which the methylated spirit had been replaced by ethereal solution of iodoform. Very little sickness followed. The drainage-tube was removed on the third day, and the serre-nœud in the second week. The patient has made good recovery.

Mr. RUMBOLL (Leeds) showed an infant born with Facial Paralysis. The mother was a primipara, with pelvis æqualibiter justo minor. She had been in labour twenty-four hours, and forceps were applied, the head being above the brim of the pelvis. The child was born with paralysis of the left facial nerve, the muscles of the left side of the face were motionless and flaccid, the eyelid could not be closed, the tears overflowed the lower eyelid, and the lines of expression were lost. The peculiarity of the case was that the pressure caused by the forceps was not on the facial nerve of the side affected, so it was difficult to say what caused the paralysis.—Dr. WILLIAM GAY (Leeds) remarked that the interest in the case chiefly lay in the fact that it illustrated well the tendency of such palsies to get rapidly well. There were a few recorded cases, however, in which the paralysis had persisted through life, even after a birth which was perfectly normal. Seventh nerve palsy was the simplest example of peripheral obstetrical paralysis, which in its severer forms implicated the arms also, by damage to the brachial plexus caused by forceps or other operative procedure. These cases were not very rare, but had received little attention except from Duchenne, who first accurately described them.—Dr. BRAITHWAITE (Leeds) thought that pressure upon the facial nerve must have been produced by the blood which had been squeezed out of the opposite side of the head by the forceps.

Dr. SINCLAIR (Manchester) read a paper on the Diagnosis of Gonorrhœal Infection in Women, of which the following is a summary. The condition of which this paper treats is of more common occurrence than is yet admitted. Many cases remain undiagnosed by medical practitioners and even by specialists, hence the treatment remains unsatisfactory. Since Noeggerath's essay appeared, and more especially since Neisse's discovery of the gonococcus, so much attention has been given to the phenomena produced by gonorrhœa in the female that we have now almost or altogether established a clinical type of the disease. From this it follows that with an attention to the signs and symptoms, which is perfectly practicable for any medical practitioner, there is no need in the consulting-room to call in the aid of bacteriology. The diagnostic points are made out partly from the anamnesis, and partly by inspection of the indelible traces which an attack of blennorrhagia leaves on the female genitals. The assistance to be obtained from the patient's recollection of symptoms in a chronic or obsolete case is comparatively little unless the questions are directed to certain points and clear answers patiently elicited. As the disease frequently reaches the uterus, and even the tubes and ovaries, one of the most constant features is a change in menstruation. For the first time in the patient's history there is one menorrhagic period, or perhaps two, and after that menstruation becomes painful, or there is a marked change in the character of the dysmenorrhœal pain. Among the points mentioned as diagnostic of a former attack are the changes in the Bartholian glands or the orifices of the ducts, the persistent turbid discharge from the cervix, and the changes in the ovaries. Only two causes are known capable of producing the changes mentioned—either puerperal or surgical sepsis, which may be reckoned as one, or gonorrhœal invasion. Several typical cases were described; these had remained undiagnosed, although they had undergone more or less prolonged treatment. Many varied in the remoteness of the time of infection, from three months to eighteen years.—Dr. WALLACE said in years gone by gynæcologists had neglected this subject.—Dr. ALEXANDER (Liverpool) said Dr. Sinclair's conclusions had surprised him. In his experience at a large lock hospital, and also the largest lying-in hospital in Liverpool, he only remembered one or two cases of pyosalpinx in prostitutes. In private practice the symptoms described by Dr. Sinclair were found most often after abortions or labours. He considered inflammation of the glands of Bartholin a good test for gonorrhœa; the uterus was affected only rarely.—Dr. MARTIN (Blackburn) thought that prostitutes seek advice early, and thus escape more than others; but the fact remained that prostitutes are, as a rule, sterile.—Dr. SINCLAIR then replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the Medical Section was held on April 11th.

Passive Movement Treatment of Disease.—Dr. KENDAL FRANKS read a paper on this subject. He began with a historical sketch to show that this method of treatment was not a novel one, but dated back to the earliest times, and had been used by all the nations of the world. It fell into disrepute among physicians and surgeons because it came into the hands of charlatans and quacks. He then explained its physiological action, and quoted cases to show its power in neurasthenia, and how its effects were interfered with by insanitary conditions. He cited cases of general neuralgic pains, sciatica, and insomnia, all of more or less long duration, which had yielded to its beneficial influences. Its use in certain paralytical affections was dealt with, and the cases in which it was likely to succeed were indicated. Mr. Franks advocated a modified system of massage in cases of gout, by which he had found that a fresh attack of the disease was long delayed, and immediate relief was speedily attained. In surgical cases local massage was frequently useful and produced astonishing results in recent sprains and fractures. In a case of Pott's fracture massage was employed eighteen days after the accident, and the patient was enabled to walk with ease, with a freely movable and painless joint twenty-two days later. A boy aged fifteen (who was exhibited at the meeting), with a transverse fracture of both bones of the leg, was able to raise the leg from the bed without assistance on the twentieth day, and was able to walk about with a light support on the leg on the twenty-sixth day.—Dr. COX believed, from what he had read of the experience of Weir Mitchell and Playfair, that the importance of massage, carried out in detail, combined with high feeding, rest, and isolation, could not be exaggerated; but of course bodily exercise achieved better results than massage in stimulating respiration and the circulation of the blood.—Dr. ORMSBY said he had had considerable experience of massage since 1880, and he was fully sensible of the utility of that method of treatment in suitable cases; for instance, in the case of a young lady, who for nearly three years had occupied a recumbent position suffering from hysteroparalysis, he adopted massage as part of the Weir-Mitchell treatment, and it proved highly beneficial after almost every other form of treatment had failed; but there were many cases in which hysterical young ladies, when the treatment was abandoned, relapsed. Massage of itself would not suffice. He had more faith in the Weir-Mitchell treatment, which combined massage with seclusion, rest, electricity, and dietetics. While regarding massage as a valuable agent in suitable cases, he was satisfied that it was not a cure-all, and that from its indiscriminate use it was desirable the treatment should be placed on a scientific basis.—Dr. TOBIN mentioned that in the northern parts of India he had seen massage adopted to put horses into marketable condition with the minimum expenditure of material. Balls composed largely of ghee and sugar were forced into the horse's throat, and some hours afterwards the animal was massaged at the particular parts where development was desired. The masseur with

gloved hands pounded the flesh at those parts; but the horse was never exercised, and so the required development was brought about in the cheapest way. Although the horses were bought in large numbers for the artillery, he did not consider the animals were in condition to "go," their lungs and heart not being in a corresponding state of development. Hence he thought it was advisable to combine exercise with massage.—Dr. WALLACE BEATTY said he had had experience of a remarkable instance, in 1884, of the benefit of massage. An army medical man who had been in India got intermittent fever and lost the power of digestion, so that he was unable to take anything but milk, and that in small quantity. Any other food gave him heartburn and made him miserable. A Dublin physician, who had treated him for two or three months without doing any good, was of opinion that he had malignant disease of the stomach. At length the patient came to Dr. Beatty, and he saw him along with Dr. Head. Various things were fruitlessly tried. The patient was losing flesh—from 10st. he went down to 7st., and his tongue was constantly furred. As a last resource, he proposed to try the movement treatment. The patient consented, and was placed in the Adelaide Hospital, where his brother, who was a strong man, was also accommodated in order to massage him. In nine days his tongue got clean, he gained a stone in weight, and from that time onwards his progress to recovery went on till he was able to resume duty in Dublin.—Dr. M. A. BOYD said he had had some five or six cases treated by massage, and two of these with such success as to make a great impression upon him. The one was a case of sciatica of two years' standing, and the other was one of alcoholic neuritis, which, having resisted treatment by electricity, were ultimately cured by the movement treatment. Dr. Franks had omitted to notice that very important group of paralytic cases—namely, paralysis depending on neuritis.—Dr. ALFRED SMITH said he had found massage beneficial in cases of prolapse of the uterus and other pelvic troubles, the products of cellulitis, as he had already detailed in a communication which he read before the Obstetrical Section.—Dr. HEUSTON recited a case of long disuse of the limbs from traumatic paraplegia which speedily recovered under this treatment.—Dr. FRANKS, in reply, said massage would be found beneficial in infantile paralysis, owing to the great developmental power in the child, while it was not so likely to succeed in arresting progressive atrophy in the adult. He claimed for massage that in the case of fractures it induced rapidity of union without deformity by preventing adhesions from forming round joints. As regards the interesting cases referred to by Dr. Smith, he had himself advised massage in a case of retroflexed uterus, for which a pessary was used. The pessary was removed, and massage having been tried, the uterus became normal, and there was no need to put in a pessary again.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

THE summer provincial meeting and dinner of the Association were held on June 2nd, in the Pump-room Hotel, Bath. In the absence of the President (Dr. G. H. Kidd), who was detained at the General Medical Council, Dr. Gilbart-Smith took the chair. After the transaction of some official business, the chairman of Council, Dr. Macnaughton Jones, gave a *résumé* of the work done by the Council since the last general meeting, on March 17th, in connexion with the exclusion of Irish diplomates from the honorary staff of English hospitals. He reported that the Council had issued a circular to all the governors of the Bristol General Hospital, pointing out the injustice of the restrictive rules in force. The Council had also been in communication with the Irish Colleges in relation to this matter, and had brought the report of the chairman of the governors of the Bristol Hospital under the notice of the governing bodies of the Irish medical corporations. The King and Queen's College of Physicians (Ireland) had issued a statement to the governors of the Bristol Hospital showing the conditions under which their membership was attainable, and the very severe restrictions imposed on members. The Royal College of Surgeons in Ireland had appointed a committee to take action in reference to the same subject. The honorary consulting staff of the Bristol General Hospital did not approve of these restrictive rules, and had expressed their disapprobation by a circular letter to the governors, in which, among other matters, the injustice of such prohibiting regulations was pointed out. On the motion of Dr. Brabazon, seconded by Dr. Broom, a vote of thanks was passed to the Council for its action in the matter.

In the evening thirty members and guests dined together at the Pump-room Hotel, Dr. Gilbart-Smith, president-elect, in the chair. After the usual loyal toasts, Mr. Freeman of Bath proposed "Our Guests," which was responded to by Mr. Gaine (Clifton) and Dr. Marshall (Bristol). Dr. Swayne (Bristol) proposed "The Irish Medical Schools' and Graduates' Association," which was responded to by Dr. Macnaughton Jones. Dr. Gilbart-Smith proposed "The Local Reception Committee," to which Dr. Brabazon replied. "The Health of the Retiring Metropolitan Secretary, Dr. Abraham," was given by Mr. Stewart. It was announced that Dr. Cagney and Brigade Surgeon Ffolliott had succeeded Dr. Abraham as Metropolitan Secretaries, and that the Association now numbered upwards of 600 practitioners.

DINNER TO SURGEON PARKE, A.M.S., BY THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

ON Saturday last Surgeon Thomas Heazle Parke was entertained at dinner by the President and Fellows of the Royal College of Surgeons in Ireland, and presented with the Honorary Fellowship of the College. The President (Mr. Austin Meldon), having proposed the health of Surgeon Parke, which was received with enthusiasm, said that he had been deputed by the College to present him with the Honorary Fellowship of their College, which was the highest honour it was in their power to bestow. At the present time there were only eighteen recipients of this honour, and these were all men like M. Pasteur, Sir James Paget, and Sir Joseph Lister, whose names were known in every part of the scientific world. Need he say in presenting him with the Fellowship that he trusted he might live long to enjoy the honour conferred on him by the Royal College of Surgeons. Surgeon Parke expressed his thanks for the honour which had been conferred upon him in electing him an honorary Fellow of the College. He felt it was impossible adequately to express his thanks for that distinction about which they were very jealous, seeing that only eighteen lived who possessed the honour. He felt it in an especial manner because all the members of the branch of the army to which he belonged—the Medical Staff—regarded it as an honour conferred on themselves. It was with no ordinary pleasure and gratification that he came back to his native country and to the place where he received his instruction, and found assembled at that magnificent banquet those who had taught him the profession to which he had the honour to belong. If he had obtained any success, it was due to the professors who had taught him. He was indebted to that College for his knowledge of surgery and anatomy, and he could not forget the City of Dublin Hospital where he had received no inconsiderable portion of his education. Having given a graphic account of his experience of the Dark Continent, he concluded by again thanking the President and Council for the honour they had conferred on him.

WADHAM COLLEGE, OXFORD.—There will be an election to four scholarships on Dec. 6th, 1890. Candidates must not have exceeded nineteen years of age on Dec. 6th. The value of the scholarships is £80 a year, inclusive of rooms and of all allowances. The warden and fellows have power to give exhibitions of £30 or £40 a year, tenable on the same conditions as the scholarships, to candidates who do well in the examination. In the election to one of the exhibitions preference will be given to any candidate who shall undertake to read for honours in natural science from the time of his admission into college, and to proceed to a degree in medicine in the University of Oxford.

THE LANCET.

LONDON: SATURDAY, JUNE 7, 1890.

MR. JONATHAN HUTCHINSON'S address at the Mansion House (which we propose to publish this week in a second edition) in support of the Hospital Sunday Collection, is well calculated to stimulate the sympathies of his hearers and will not fail, we confidently hope, to produce a distinct effect upon offertories of to-morrow. The duty of supporting this movement is one which is especially incumbent upon all whose special knowledge of the facts gives them the means of appreciating how large and how pressing is the task which has to be undertaken by the hospitals of London. The public mind is but very inadequately informed, and its apprehension both of the necessities to be provided for and of the provision actually made is very imperfect. The institution of Hospital Sunday has done something to dispel ignorance on this subject, and since their attention has in this way been specifically called to the matter, the ministers of religion of all denominations have proved themselves most able and valuable supporters of the Council in the all-important work of making the claims of the institution generally known. That better acquaintance with the facts is all that is required to induce Londoners to respond in a fitting manner to the demands of the metropolitan hospitals is what few will doubt, and any doubt that may exist may easily be set at rest by a reference to the history of the movement. We reproduced last week an excellent sketch, which has been prepared and circulated by the Council of the Fund, showing, amongst other things, that in a period of seventeen years the amount collected has increased by upwards of fifty per cent., having risen from £27,700 in 1873 to £41,745 last year. With slight fluctuations from time to time the growth has been continuous, manifesting a growing hold upon the consciences and sympathies of the congregations of the metropolis. We confidently look forward to a still further development in this direction. There still are places of worship which are not to be found in the list of contributing societies, and it is easy to believe that among those which do contribute are some to which a strong appeal for more liberal aid might fittingly be addressed. It is little by little that people get educated up to their duties, and the present is no exception to the rule. One congregation alone which from the very first has warmly supported this movement contributed last year the magnificent sum of £1208 15*s.* 10*d.* On the first occasion the collection taken amounted to but little more than £200. So much are the sympathies of even the best disposed of men quickened by increased knowledge of the facts and growing familiarity with the duty and luxury of giving.

There is one feature of the Hospital Sunday collection, too little insisted upon perhaps, which ought to commend it strongly to all Christian people as being a pre-eminent opportunity of "doing good by stealth," and "letting not the left hand know what the right hand doeth." The absolute anonymity of the gift saves munificence from the reproach of ostentation, while at the same time it encourages the poorest to do what in him lies, how small soever his ability may be. Moreover, the painstaking and systematic care bestowed by the Council on the administration of the Fund secures to every contributor the comfortable confidence that his gift has been turned not only to good account but to something like what is practically the best account, being apportioned with due regard to the merits and other claims which the several institutions are able to establish. Such opportunities of exercising single-minded and enlightened beneficence are all too few. This history of this Fund, at which we have already glanced, shows that the religious world does not undervalue an opportunity of this kind when it arises, and we feel satisfied that to secure its meeting with a fully adequate response nothing more is necessary than that it should be generally understood that the hospitals of London are actually crippled for want of funds, and that the good work of the Hospital Sunday Fund Council is capable of a large and most important extension, as soon as the necessary augmentation of its resources is secured.

There is one feature of the Hospital Sunday services which has in recent years been introduced in a few places of worship, and might, we think, with great advantage be adopted in all. We refer to the addition of a floral tribute to the money collection. Gifts of flowers and fruit are always most acceptable at any hospital, and nothing tends more to quicken feelings of personal sympathy and human interest in the inmates of our hospitals than does the provision of such inexpensive gifts. We say inexpensive advisedly, for the substitution of costly bouquets for donations of a more serviceable kind is certainly not a thing to be encouraged or even suggested. But the simplest flower, and the simplest and homeliest is for this purpose the best, will often unlock the treasury of happy recollections for a poor bed-weary patient, and breath the fragrance of the garden or the fields in the atmosphere of the hospital ward. The means of such gentle and humane ministry are at this season of the year ready to every hand, and it was a noble thought which led to their being utilised to give a finishing touch of grace and loveliness to this act of charity and message of goodwill.

In conclusion, we may add that we have again distributed 100,000 copies of the abstract of THE LANCET Metropolitan Hospital Sunday Special Supplement, published in our last week's issue—viz.: to ministers of contributing congregations in parcels containing from 2000 to 20 copies in proportion to requirements; 3 copies each to 350 London and suburban newspapers, and to 156 hospitals, dispensaries, convalescent and cottage hospitals: and 15,000 copies to the private addresses of members of the Stock Exchange and other Exchanges.

THE meeting of the General Medical Council has, after all, been prolonged over the time which has generally

been considered to be its normal span of vitality. It was found that the finances of the Council were in a flourishing condition and, with the realisation of this fact, it appears to have been felt that the General Medical Council had a free hand for full discussion. Accordingly, day after day the Council resolved itself into a committee, and the flood-gates have been thrown open to a stream of talk, embracing almost every conceivable topic. The work of amending the Register by striking out a name which had no right to be there proved too great a task, so the matter was referred to the solicitor and the Public Prosecutor. Mr. J. F. LEESON'S pathetic petition was similarly too difficult to adjudicate upon at present, so was postponed until the next meeting, and then the weighty allegations against the University of Glasgow were considered. It was asserted that a short time after the Council had practically resolved to admit gentlemen to the Register only on certain conditions, the University of Glasgow had violated these conditions by holding an examination, for which it received fifty-seven applications for the Sanitary diplomas, and at which fifty-five candidates actually received that diploma. The proposal to inquire into these allegations led to considerable discussion, and to some more or less interesting disquisitions. Remembering the educational control of the Council, a brief historical note upon the word "expiscate" was introduced. The scope of the inquiry and the question of expense were dealt with as though a Royal Commission had been proposed; but ultimately calm was reintroduced by the appointment of a small committee. What action, if any, should be taken when medical students had been convicted in a court of justice of misdemeanour, was a question which was answered very briefly and pertinently by the President. The next day, however, brought the report of the Education Committee, and the ball was once more set rolling with a velocity suggestive of perpetual motion. This opened up the whole question of medical education, the school part and the preliminary scientific part coming under consideration as well as the final and clinical part. The axiom that "the course of professional study after registration should occupy at least five years" was readily accepted; but there remained the more knotty point, what was to be done with the additional year? Was it to be regarded as being added at the head or the tail of the present curriculum? Personal reminiscences and continental practices lengthened the debate, while the "protective influence" of the Council over the licensing bodies came in for its share of explanation. Ultimately it was decided that "the first four of the five years should be passed at a school or schools of medicine recognised by any of the licensing bodies, provided that the first year may be passed at a University or teaching institution recognised by any of the licensing bodies where the subjects of physics, chemistry, and biology are taught." The obvious sequence of this resolution was challenged the following day, when it was proposed that University graduates in Arts or Science who have spent a year in the study of physics, chemistry, or biology, and passed an examination in these subjects, should be held to have completed the first of the five years of medical study. It was objected that this gave a kind of exemption or privilege to University students, while another speaker maintained that these graduates did not approach the study of medicine "by a side door, but through a splendid portal, and in the very best possible way." The concession was eventually carried, one member remarking that the cumulative result of all the recommendations might be that a "man's life work might possibly be found to begin about the time when he ought to die." The mode of disposing of the fifth year led to hard words in many directions. The recommendation of the Education Committee was that it should be devoted entirely to clinical work at a general hospital or public dispensary or as pupil to a registered practitioner. The claims of the special hospitals and the value of post-graduate teaching were urged successfully, although some special hospitals were not dealt with in complimentary terms. Turning next to the pupilage question, further discord prevailed for a time. The fear of the pupil sinking to the position of an unqualified assistant, and the supposed difficulty of securing efficient teaching from even the very best general practitioner, caused anxiety in many minds and led to many conflicting amendments. Personal experiences once more were appealed to, and the "general practitioner" came in for his share of criticism, while the Council received lengthy instruction upon matters of recent history connected with the unqualified assistant. The registered practitioner who may be allowed the privilege of taking a pupil was defined as one "holding such a public appointment or having such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities." The report of the Pharmacopœia Committee, which is referred to in another column, was adopted, and then the need of restriction of systematic lectures was considered. The chief difficulty connected with this appeared to be that in Scotland teachers were forced to establish a regular daily system of lecturing. The General Medical Council seem here to have grasped the tendencies of the day, and while they do not desire to trammel individual schools and individual teachers, they urge the importance of allowing more time for practical studies. The well-meant efforts to render the clinical work more precise by requiring detailed certificates showing the number of cases actually studied did not meet with general support; in fact, it was pointed out that the Education Committee had gone too deeply into details, in trying to teach the teachers how to teach. The Council, while admitting the desirability of a knowledge of infectious diseases, and of the more special departments of medicine, found it difficult to see how the schedule suggested by Dr. GLOVER could be brought into working order. The intention of the General Medical Council is clearly that the final year should be devoted entirely to clinical work, and that no time should be taken up with attendance at systematic lectures, but the accurate phraseology which should ensure this result gave considerable trouble. Turning back once more to the scientific part of the professional examinations, the suggested introduction of biology gave rise to much discussion, but was ultimately agreed to; while the scheme for the preliminary examination in general education, which is of a broad but not oppressive character, also passed. It is

gratifying to note that the Council repudiated the suggestion that counsel's opinion should be sought upon the meaning of the words "qualifying examinations," and that measures were adopted for securing the continuity and sequence of study. A happy thought, devoid of practical results, compared yearly examinations to pulling up the radishes to see how they were growing; but the feeling of the Council was evidently in favour of frequent examinations as an inducement for thorough work. The grievances of the Irish diplomates in their exclusion from important surgical and medical appointments in the United Kingdom has often been touched upon in these columns; but the eloquence of Mr. MACNAMARA, his invention of the word "trilemma" and his explanation of its meaning, failed to interest the Council in a matter over which it felt no control could be exercised. The report of the committee upon the action of the University of Glasgow in granting diplomas in Public Health is very strongly worded, and conveys strong condemnation of the examination held last October. The results of the present session of the General Medical Council may prove eventually to be of considerable importance. The fifth year has been approved, and indications have once more been afforded of the feeling that medical education still lacks a practical element. It is difficult, however, not to feel that these results have been painfully attained by a "long and casual discussion," which greater knowledge of students, of teachers, and of examinations might have obviated.

THE fact that pneumonia is a frequent sequel to influenza has long been known, and it has been amply illustrated in the records of the recent visitation of the latter disease. Indeed, pneumonia has been the cause of most of the deaths which have been attributed to the epidemic. The subject has formed the basis of an interesting discussion at the New York Academy of Medicine,[1] when papers upon it were read by three such competent observers as Drs. PEPPER of Philadelphia, E. G. JANEWAY of New York, and SHATTUCK of Boston. Dr. PEPPER had collected information from upwards of 200 practitioners in Philadelphia and the State of Pennsylvania, and he stated his belief that, of the entire population of Philadelphia, at least two out of every three, and more probably three out of every four, individuals had suffered from the influenza. He gave statistics showing that eighty-four deaths were due to influenza without pneumonia, and 173 to influenza with pneumonia, the mortality rate of the pneumonia cases being 11·65 per cent., or practically identical with the rate for pneumonia alone. Another striking fact was that the death-rate from pneumonia during the past winter (end of December to beginning of February) was three times as great as in the corresponding period a year ago. So far as could be gathered, the cases of catarrhal pneumonia were about twice as numerous as the croupous. There was a marked excess of right-sided inflammation, and an unusual proportion of apex cases, with predominance of cerebral symptoms. Pleurisy was more frequent than usual, and so was pericarditis. In many cases jaundice was associated with the pneumonia of the right lung. Albuminuria was almost constant, pointing to an infectious nephritis in the pneumonia accompanying influenza. Diarrhœa occurred in some, and was an unfavourable symptom. As regards pyrexia, it was observed that the temperature was often unusually high during the first thirty-six or forty-eight hours, but in some cases the fever was low. Dr. PEPPER regarded pneumonia as a sequel rather than a complication of influenza, slight exposure during the convalescence stage sufficing to induce an attack. He referred also to the nervous symptoms of influenza, and suggested that the marked weakness of respiration noted in these pneumonia cases might be due to involvement of the vagus nerve. Owing to this weak breathing, the diagnosis was not always easy. The post-mortem characters were not special. FRIEDLÄNDER'S pneumococcus had been found in some. Dr. SHATTUCK had collected statistics from the Boston hospitals, and arrived at the following conclusions:—1. Pneumonia was unusually prevalent in Boston during the height of the influenza epidemic about the middle third of the visitation. 2. The statistics of the Pacific Mills indicate that less than 1 per cent. of those severely attacked by influenza acquired pneumonia. 3. Broncho-pneumonia was rare in the hospitals. 4. The pneumonia mortality was probably not increased (probably diminished), as compared with that of the previous five years. 5. The number of cases of pneumonia not preceded by *grippe* symptoms was about the same as the number of pneumonias in an average year. 6. Pneumonia followed *grippe* in so large a number of cases as to show some sort of connexion between the affections. 7. In 60 per cent. of the cases a single lobe was involved. 8. Two-thirds of the cases terminated by lysis. 9. Pneumonia was three times as frequent in males as in females, and the mortality rate increased with each decade. 10. The most striking increase in the urban deaths from pneumonia was, on the whole, between the ages of twenty and thirty and eighty and ninety. The increase under ten was slight. 11. The morbid appearances in nine cases examined after death were not specially noteworthy. Dr. JANEWAY gave the New York experience, which showed the great prevalence of pneumonia and bronchitis during January and of pneumonia during all three winter months. The cases he had seen were marked by short duration, the crisis occurring on the third day in one, the fourth day in one, and the fifth day in two. He commented on the "latent" character of the pneumonia in several instances. He thought sanguineous expectoration was more frequent, and that pleurisy occurred in an unusually large number of cases. There was a large proportion of "patchy" pneumonia with bronchitis. These papers, dealing with three of the most important cities in the States, should prove of great value in forming conclusions upon the subject.

[1] Boston Med. Surg. Jour., April 24th.

THE events which have occurred in Egypt since the battle of Tel-el-Kebir and the establishment of the British protectorate have tended to bring again prominently before the public and the profession the characteristics and claims of one of the oldest and most justly famous of sanatoria. The valley of the Nile is in nearly all respects one of the

most unique regions of the world, almost rainless, but of abounding fertility, surrounded by desert, but itself one of the great granaries of civilisation, and with a history as singular and impressive as its physical characteristics. It seems probable that the regular succession of abundant harvests, owing nothing to season and everything to the fertilising Nile mud, rendered life so easy in the Nile delta, and subsistence so secure, that here for the first time in the history of humanity mankind had time to breathe in the fierce struggle for existence—time to found great cities, to civilise themselves, and to think out the first principles of science, philosophy, and religion. The repute of Egypt as a health resort is also of considerable antiquity, but has fluctuated with the social and political condition of the country. A sanatorium does not depend solely upon its sunshine, its dryness, or its scenic beauty. The invalid must think of the comfort and security of travel, and with such a wealth of choice as he has now at his command he need not choose to patronise any resort where hardship or danger is likely to be encountered. Egypt suffered through the social demoralisation that prevailed during ISMAIL'S *régime*, and by the alarms and calamities of the Soudanese wars. Under the firm rule of Britain order is now secure, new hotels are rapidly multiplying at Cairo, Helouan, Luxor, Ramleh, and elsewhere. The service of steamers and dahabiyehs upon the Nile has been greatly extended and improved, medical men of good repute and experience are to be found at the chief health stations, and it may be said that the peculiar climatic advantages of Egypt can now be enjoyed by the invalid without any serious drawbacks. Those advantages have long been familiar to us. They are those of a singularly dry and sunny climate, which permits of constant out-door exercise, and acts as a tonic to the body and an exhilaration to the mind. The prevalent idea that Egypt is rainless is not quite accurate. There are parts, indeed, of the Nile Valley, such as the neighbourhood of Luxor, where rain is practically unknown; but at Cairo, which is the chief resort of Europeans, rain falls during eight out of the twelve months, the total annual fall, however, only slightly exceeding an inch. The relative humidity of the air is also very low, the figure for the winter months varying from about 69 to 56. As regards temperature, the mean temperature for November at Cairo is 65°; for January, 55°; for March, 59°; and the mean daily range for those months does not usually exceed 5°. The maximum temperatures are, as a rule, moderate, and it may be said that from November to March no unpleasant heat need be feared, except during the prevalence of the *khamseen* wind, which is not commonly felt until the spring is well advanced.

With the practical freedom from rain there is associated an immunity from fog and cloudy skies; strong winds are rare; while to the intelligent traveller Egypt presents unrivalled opportunities for turning the hours of enforced leisure to profitable and interesting account. The Egyptian climate has, as the French proverb remind us, the defects of its qualities. The bright sunshine and dry air necessarily involve a considerable fall of temperature after sundown, a defect which belongs to all such climates. Dust, again, must be expected to be troublesome where rain is so occasional and scanty, and imperfect sanitation need not surprise us in a country where drainage on the European plan is almost unknown. Until lately Egypt was also one of the most expensive of resorts, but the recent great development of hotel enterprise may be expected to correct this drawback. The travelling world has become so cosmopolitan that the tendency everywhere is towards the equalisation of prices. The average tourist expects, reasonably enough, to get fair comfort at the rate of from twelve to fifteen francs per diem, and will not long continue willingly to pay more. The rates in Egypt until lately considerably exceeded this amount, but the tendency is towards a lower figure. Egypt is peculiarly fortunate in the circumstance that it, almost alone of very dry climates, has an unfailing supply of excellent water in the Nile.

The applicability of the Egyptian climate to disease may be inferred from its characteristics. It suits cases of debility and overwork where there is no excessive nervous irritability, as in such cases the genial climatic conditions and the multiform interest of the country may be expected to prove very beneficial. Anæmic cases also do well in Egypt, the abundant sunshine and the inducements to out-door activity proving very advantageous. But of all cases likely to be benefited by the Egyptian climate the most important are probably rheumatism, rheumatoid arthritis, and phthisis. As regards the former two little need be said, except that these diseases are extremely rare in Egypt, and that sufferers from them seldom fail to benefit by wintering in the Valley of the Nile. The case of phthisis is more difficult. As might be expected, the cases that do best are those of the incipient stage and quiescent type. A marked diminution in the amount of expectoration is often one of the earliest signs of improvement. There is an impression that hæmorrhagic cases are unsuitable for Egypt, but dogmatic statements on this subject are apt to be very fallacious. The merits and demerits of the various sanatoria for phthisis constitute so complex a question that most abstract rules are valueless, but we may say with reasonable confidence that certain parts of Egypt offer great advantages to young persons of tubercular strain who have not yet developed any evident signs of the malady, to quiescent and non-pyrexial cases, to cases complicated by rheumatism, heart disease, or albuminuria, and to cases of unresolved pneumonia or chronic pleurisy. Some of these types are among those usually reckoned suitable for the mountain sanatoria, but the line can sometimes be drawn with confidence. Rheumatism, heart disease, or renal complications are absolute bars to the high altitudes. They are rather indications for the selection of a climate such as Egypt. Early, quiescent, and non-pyrexial cases may do well at either of these two diverse types of sanatoria. The patient's previous habits and tastes, his capacity for enduring cold and fatigue, and his general constitutional condition, will help us in advising the preference of one or the other.

ON Wednesday, May 28th, Mr. John Wood, F.R.S., was presented with an illuminated address and a handsome service of silver, which had been subscribed for by his numerous friends, colleagues, and pupils. We regret to learn that, owing to Mr. Wood's state of health, the presentation was necessarily a private one, instead of taking place publicly as was at first intended.

Annotations.

"Ne quid nimis."

NON-MEDICAL CHARITIES AND THEIR MEDICAL ATTENDANTS.

BESIDES the enormous amount of work gratuitously performed by physicians and surgeons at hospitals and dispensaries, a very large amount is also done by the medical officers of charitable institutions which are not medical, and which are to be found in every town and city throughout the kingdom. These comprise the various institutions for the blind, the deaf and dumb, orphans, fatherless or motherless children, homes for fallen women—in fact, a list too numerous to specify. With few if any exceptions, the medical appointments to these charities are honorary, some of them demanding much time and attention from their medical officers, and giving very little, if any, κυδος in return. The duties are, indeed, much more irksome and monotonous than those of hospital and dispensary surgeons; and in addition to this the honorary medical officer is expected to attend not only the inmates for whom the charity has been founded, but also in many instances the paid officers gratuitously as well. At the Liverpool Medical Institution, a resolution that the medical officers of these non-medical charities ought to receive some pecuniary recognition of their services was carried unanimously, and copies of this resolution have been forwarded to us. Copies have also been sent to the managers of some of the charities in question. One of the most recent of these charitable institutions is that for the Prevention of Cruelty to Children, which, though so recently formed a charity, goes on the old track of remunerating all its officials except its medical officers. Without wishing in the least degree to appear wanting in feeling towards the worthy objects of all these charities, we must lament that it has never occurred to any of their boards of management that an honorarium at Christmas, New Year's Eve, Easter, or Whitsuntide would be a graceful acknowledgment of services without in any way compromising the position of the medical officer. Honorary chaplains are becoming scarce, the reverend gentlemen endorsing by their action the words of the Great Physician who, nearly nineteen hundred years ago, laid down the divine rule, "For the labourer is worthy of his hire." Honorary barristers and solicitors are still more scarce, and it is only in the case of members of the medical profession that gratuitous services are universally claimed as a right, and unfortunately too often eagerly proffered as if the demand were just. So long as medical practitioners accept and even compete for honorary appointments we cannot be surprised if members of boards and of managing committees regard medical attendance as a thing which can be had for the asking. But a change is coming in the ranks of young medical practitioners whose qualifications are unexceptionable and their abilities of a superior order. They very properly decline to work for nothing, preferring either to accept such appointments as are remunerated or to wait. The resolution passed at the Liverpool Medical Institution is a most reasonable one, and those whose duty and pleasure it is to continue the excellent work of these non-medical charities will do well to anticipate the future and to attach some honorarium to these appointments. If they do not, they must not be surprised if the time speedily arrive when these appointments will go a-begging.

THE PROGRESS OF CHOLERA.

WE have from time to time adverted to the rumours that cholera was approaching that portion of the southern frontier of Russia which lies between the Black and the Caspian Seas; and somewhat recently we drew attention to the establishment by Russia of two quarantine stations, with a view to protection against infection in that direction. But these statements have alternated with information which implied the complete cessation of cholera, both in Persia and in Northern Mesopotamia; information which, if true, practically did away with the risk of the danger referred to. The latest information is much of the same contradictory character. On the one hand news comes from Berlin to the effect that a disease hitherto held to have been cholerine, and which has for some time past prevailed in Astrachan, Kieff, and other parts of Southern Russia, is now admitted to be cholera itself. And from St. Petersburg comes a statement that cholera, which has been prevailing in Mesopotamia, was likely to travel westward, and also that the disease had crossed the Volga and was beginning to spread in the south of Russia. These latter statements are likely to be true, for cholera did unquestionably tend last year in the direction indicated, and it is no uncommon thing for it to lie comparatively dormant during the colder season and to give fresh indications of activity at this time of the year. But whilst this intelligence is being circulated, it is also asserted, and apparently on Turkish authority, that cholera has altogether disappeared from the valleys of the Euphrates and Tigris. It is, however, quite possible that these valleys, which were the scene of so wide an extension of cholera last summer, may now be free from the disease, whilst occurrences of cholera may be manifesting themselves further to the north and north-west, a direction in which there is a distinct risk of danger to Europe.

THE CAUSE OF THE MUSCULAR ATROPHY AROUND INJURED JOINTS.

IT is well known that in cases of injury or disease of a joint extremely rapid wasting of the limb is apt to supervene. Many explanations of this condition have been offered. It was formerly usually attributed to disuse of the limb, but Charcot showed that this explanation was insufficient, since the wasting affects mainly the extensor muscles. The wasting has also been attributed to a spread of the inflammation from the joint either to the muscles themselves or to the nerves supplying them. As the evidence in support of these views was not convincing, Dr. Raymond of Paris has undertaken a careful experimental investigation of the subject, the result of which he published in the last number of the *Revue de Médecine*. His observations lead him to the conclusion that these changes are reflex in character. He injected an irritant into the knee-joint of several animals, and found that the following changes occurred; (1) Exaggeration of the knee-jerk; (2) increase of idio-muscular contractions; (3) increase of faradaic excitability: (4) hyperæsthesia of the skin; last of all, muscular atrophy affecting mainly the extensor muscles. The peripheral nerves and spinal cord were perfectly normal when examined microscopically, and although the individual muscular fibres were wasted, there was no inflammation or other change in the interstitial connective tissue. Dr. Raymond then performed the following experiment: He divided the posterior roots of the last four lumbar nerves on one side only, and injected an irritant into both knees. Both became inflamed, but atrophy occurred only on the side on which the posterior nerve roots were intact. He considered that the wasting must be due to interference with the function of the cells in the anterior horns. He found in later experiments that if the impulses descending from the higher centres along the pyramidal tracts were cut off there was much less atrophy. Thus in newly born animals in which pyramidal tracts were not developed, he found that atrophy occurred to a much less extent than in adults, and that if, in a full-grown animal, a hemisection of the

cord was made above the level concerned, the atrophy resulting from joint injury was much less on the side of the lesion of the pyramidal tract than on the other side. The experiments are of interest, not merely as showing the cause of a well-known symptom, but also as affording additional accurate data with regard to the "trophic" action of the cord and the factors which influence it.

AN ISOLATION HOSPITAL IN HERTFORDSHIRE.

THE urban and rural sanitary authorities of Hertford and of Ware have decided to unite for the purposes of the erection of a joint hospital for infectious diseases. The plan has evidently received the concurrence of Dr. Turner, the medical officer of health, and it has been supported by some very sensible comments on the part of Mr. J. B. Brandram, chairman of the Local Board of Health for Ware. It would seem that, according to Dr. Turner, a hospital for thirty beds could, by united action, be erected for about £100 a bed. This sum is by no means a large one when it is remembered that the accommodation for the separate diseases must be entirely distinct, and that it will be necessary to have separate buildings for such purposes as administration, laundry, mortuary, disinfection, &c. Another estimate of £5000, inclusive, was also suggested at the meeting; and such a sum divided between four sanitary districts cannot be regarded as in any way excessive when compared with the cost, anxiety, and destitution which periodically result from the lack of means by which to control infectious diseases.

MEDICAL PHILANTHROPY.

FLORENCE, celebrated for her organisation of the "Misericordia"—a Society for the gratuitous assistance of families visited by sickness or death, the working of which so interested Her Majesty Queen Victoria during her sojourn at the Villa Palmieri—has at length supplemented that time-honoured institution by another called "La Guardia Permanente Medico-Chirurgica." Every Florentine citizen, male or female, whose circumstances do not admit of paid medical consultations, may now, at any hour of the day or night, by calling at or sending to the headquarters of the "Guardia," in the Via Sole, secure immediate and effective assistance for any injury or disease from which he or she may be suffering. The one condition on which the required attendance is given is this—that the applicant shall be too indigent to be able to pay a regular practitioner. So checked, the services of the "Guardia" are in no danger of compromising the legitimate gains of the profession. On the contrary, the time of the busy, too often struggling, practitioner, is spared the calls which his humanity makes him respond to, but which should in justice be addressed to charities specially maintained for the sick poor. The assisting hospitals and the medical police service do not, it is found in Florence, suffice for cases of urgency, still less during such epidemics as that of influenza lately prevalent. Too often the surgeon's aid is wanted, when it is not available, from pressure of other claimants on him. Valuable time is lost, and the patient dies, or drifts into a state in which intervention, however skilled, is fruitless. The *personnel* of the "Guardia" is composed, on the one hand, of consultants recruited from the flower of the faculty and of "medici attivi," also ably represented, who relieve each other for "assistenza immediata," and on the other of an administrative staff which includes the laity as well as the profession. The leading pharmacists of the city have also generously come forward to supply medicines to the "Guardia" at minimised rates. A "polyclinic" for consultation is another adjunct to the institution, and will present from week to week in regular series a selection of forms of disease for observation and instruction. The "Guardia Permanente Medico-Chirurgica" is in short a charity, instituted for the ailing poor, for relieving the pressure on already existing hospitals and medical police service, and also for protecting the general practitioner from unremunerative calls. It has been introduced into Florence from Milan, whose rapidly increasing population suggested it, and whose wants it has met opportunely and well. Like its Milanese prototype, it has the support, not only of philanthropic citizens, but of the municipal authorities and the provincial sanitary board—bodies which in other cities besides Florence and Milan would do well to follow an example so praiseworthy.

AMŒBÆ IN DYSENTERY.

DR. W. OSLER of Baltimore contributes a note (*Centralblatt f. Bakteriologie*, vii., 23) confirmatory of the observations by Lösch, Koch, and Kartulis on the presence of amœboid organisms in the fæces and intestine of dysentery, Kartulis also finding them in an abscess of the liver associated with that disease. Dr. Osler says that so far as he knows, the presence of these organisms has only been found in Russia and Egypt, which adds to the interest of his communication. The patient had lived in Panama for five years, when he suffered from chronic dysentery. In May, 1889, he travelled to Europe, spending several months in Vienna, when he had another attack of dysentery. He returned to Baltimore in December, and was seen by Drs. Osler and Friedenwald. For more than six weeks he suffered from irregular pyrexia, slight rigors, and sweating. On March 22nd Dr. Tiffany incised two abscesses in the right lobe of the liver. The bile-stained creamy pus was found by Dr. Osler to contain amœboid bodies, about twelve times the size of white corpuscles, and showing active movements. The protoplasm was composed of an external homogeneous portion and a central granular substance, in which were numerous vesicles of various size, and ill-defined nuclei. The amœbæ remained active an hour after the pus had been evacuated; and in that which escaped afterwards abundance of these organisms were found, in one instance retaining their activity for more than six hours. The fæces, which had partly lost their dysenteric character, were found to contain similar actively moving amœbæ. Dr. Osler says that the structure of these organisms, their movements, and general appearance, leave no doubt as to their parasitic nature. He adds that his observations were confirmed by Professor Welch and Dr. Councilmann.

THE BROTHERHOOD OF SCIENCE.

POLITICAL jealousy seems to have been conspicuous by its absence in the international celebration of Montpellier's sixth centenary of academic life. The cordiality of German congratulation was more than reciprocated by French acknowledgment—the former never failing to touch a sympathetic chord which in the latter found ready and gratified response. The University of Leipsic, in the address she tendered to the Montpellier School through her representative, Dr. Ferdinand Zirkel, made some peculiarly happy allusions to the rise of the French seat of learning, as may be seen from the following extract: "Inclutæ universitati litterarum Montispessulanæ, 'fontis artis physicæ' præconio jam sæculo XII. celebratæ, Salernitorum primis ab initiis in medicina æmulæ, nec non jurisprudentiæ artiumque liberalium studiis longo ex tempore deditæ, ad generalis autem studii dignitatem Nicolai IV. sancti patris bulla ante hæc sex sæcula merito erectæ, doctorum eruditissimorum, inter quos Franciscus Rabelæsius æterna lepidissimi ingenii laude floret matri fecundissimæ, nunc incohata septimi sæculi auspicia lætissima celebranti vegetam in omne ævum salutem novosque semper litterarum fructus gratulabundi exoptant universitatis litterarum Lipsiensis rector et senatus." ("To the famous school of literature

at Montpellier, celebrated even in the twelfth century as 'the fountain of medical wisdom'; the rival from her first beginnings of Salernitan medicine; long devoted to jurisprudence and liberal culture; justly raised, moreover, to the dignity of a university six centuries ago by the Bull of the Holy Father Nicholas IV.; the prolific mother of most learned teachers, among whom François Rabelais stands conspicuous for the undying glory of supreme wit and humour, now celebrating her auspicious entrance on the seventh century of her academic life, the Rector and Senatus of Leipsic University, wish for her, with cordial congratulations, a perennial measure of health and activity and the fruits, ever fresh, of literature and science.") The epithet, "Fons artis physicæ" was originally bestowed on Montpellier by the German monk Cæsarius von Heisterbach (1170–1240), but in a spirit of irony, regretting as he did that her physicians and surgeons should, in contempt for the miracle cures in which he believed, proceed by the prosaic method of interrogating and cross-examining nature. It was well conceived, therefore, on the part of the monk's modern compatriots to give back to Montpellier what in his ignorance he had withheld, and to "rectify the scientific frontier" by turning the sarcasm of the twelfth century into the compliment of the nineteenth.

HONOUR TO SIR JOSEPH LISTER.

As already stated, the new Policlinic in Rome will have its two façades adorned with bas-reliefs in illustration of the modern genius of medicine: John Baptist Morgagni, representing pathological research, and Sir Joseph Lister surgical treatment. Designs for the bas-reliefs in question have been sent in by twenty-one competing sculptors, and are this week on view in the Scuola Vittorino da Feltre, in the Via della Polveriara. The number of designs is thirty-six, several artists having submitted more than one to the "Comitato Aggiudicatrice." The committee, which is composed of an equal representation of fine art and medicine, under the presidency of Dr. Guido Baccelli, has no easy task before it, as the competitors include the acknowledged masters of sculpture in Italy.

THE PULMONARY CIRCULATION IN MITRAL DISEASE.

SPEAKING of the disordered pulmonary circulation in cases of mitral valvular disease, M. Duroziez (*Union Méd.*, No. 64) points out that in both mitral obstruction and regurgitation there must be produced a pulmonary "venous pulse," analogous to the jugular and other systemic venous pulsation met with in tricuspid insufficiency. Therefore in any case of mitral disease the lungs should be most carefully and frequently examined, and the signs of slight bronchitis may be the first indications of the effects of the cardiac lesion. The diagnosis of pulmonary congestion, he says, is not always easy; it is often only revealed by the distension of the thorax and the lack of expiratory power due to the loss of pulmonary elasticity; and in such cases, weakness of the respiratory murmur may be the only ascultatory sign. The existence of even such slight abnormalities should awaken suspicion of the true character of a cardiac bruit; and he points out that even "functional mitral regurgitation" must, while it lasts, produce a like effect on the lungs. It is often said that the effects of mitral insufficiency are perceived in the liver before they are manifested in the lung; but this is owing simply to the difficulties in recognition of the pulmonary disturbance; unless the tricuspid be simultaneously affected, when the hepatic signs predominate. The gravity of the pulmonary condition is appreciated by the consideration that with each systole the pulmonary artery and pulmonary vein must become distended with blood. It is suggested that one reason for the conduction of mitral regurgitant murmurs to the back may be due to the current in the pulmonary vein, as well as to the posterior position of the left auricle.

INTERNATIONAL MEDICAL CONGRESS.

THE Committee of the Exhibition to be held at Berlin during the meeting of the Medical Congress desire it to be known that all applications must be sent to them by the middle of June. They especially invite authors of papers and others to send preparations, pathological and other instruments, apparatus, &c.—for example, pelvic deformities and tumours, methods of preservation and staining, and for bacteriological research; and for such space will be found free of charge. Arrangements will be made for the purpose of scientific demonstrations at certain hours, and those who wish to undertake them are invited to communicate with the committee.

THE "DACCA" DISASTER: MEDICAL HEROISM.

THE success which naturally should, as it often does, crown the efforts of those who exhibit self-possession and endurance in the presence of danger was never more strikingly illustrated than in the recent disaster to the emigrant steamship *Dacca*. The vessel, it will be remembered, struck on a reef in the Red Sea. The removal of her large and precious freight of human life became an instant necessity. Yet so admirably were all the needful arrangements carried out that not a life was lost. The most remarkable feature about this occurrence was the entire absence of anything like a panic. This very satisfactory circumstance is doubtless explained in part by the fact that daylight and the prevalence of calm weather combined would do much to allay any suspicion of impending misfortune in the minds of the passengers. No less important is it to note that the discipline of the ship had been admirably maintained since her voyage began. To this fact and to the intelligent energy and coolness exhibited by officers and crew the marked success which attended the work of landing and transhipping passengers is mainly to be attributed. To us it is particularly gratifying to observe that foremost in his unpretending display of these qualities was a member of our profession, the ship's surgeon, Mr. Hickling. His conduct, as described by an eye-witness, affords a most pleasing example of methodical self-possession and courage. Whether in assisting the captain to maintain order, in directing the transit of his patients to the boats, carrying one invalid himself, or in his unflagging attention to the sick when safely housed on shore, he constantly appears as the right man in the right place. It is certainly not too much to say that to his conspicuous example, and the similar presence of mind shown by each officer and man, we must ascribe the ultimate safety of every life on board.

MEDICAL ADVISERS IN POLICE COURTS.

THE principle that certainty in the diagnosis of disease, or anything approaching it, can only be attained through the medium of a qualified medical man, is too well established in experience and in common sense to admit of any question as to its truth. Apart from the constant evidence of common life, it finds illustration at least in the occasional practice of every law court. It also constitutes the foundation of our system of inquest, and of its most rational development, the institution of medical coronerships. We are not, therefore, surprised to find that the metropolitan police magistrates have come to claim the medical element as an essential part of the machinery employed in the administration of justice. Thus far there can be no real difference of

opinion. As regards the means by which the help of medical skill may best be obtained there is, however, some room for disagreement, as recent events have shown. In the opinion of the bench, a practitioner of medicine should be in constant service in court in case of need. The police executive, on the other hand, prefer to exercise the power of enlisting medical assistance from without in any given case by special order. There is, we admit, reason in both views. We should probably be right in associating with the latter the advantage of State economy, while it must also be allowed that the settlement of many ordinary questions in dispute would thus be provided for. Such an arrangement, however, can never be equal in absolute efficiency to that approved by the magistracy. The appointment of a medical adviser in regular attendance implies of necessity the creation of a new office with a fixed salary attached. It also ensures at the same time a definite return in the quality of work done. Much valuable time would be saved. The official referee could at once be found if required. His familiarity with the procedure of courts could not but facilitate the conduct of business, and his opinion, strengthened as it must be by more particular study and experience of a variety of medico-legal cases, would be proportionately reliable. This, therefore, is clearly the more practical though perhaps also the more costly of the two plans proposed. We will not say that it is indispensable, since hitherto it has been done without, but it is for the Legislature to determine whether the more perfect and expeditious action of law thus guaranteed is or is not worthy of the special effort which it entails. Perhaps a tentative experiment carried out in one or two selected police courts would be the best means of arriving at a decision in the matter.

ROYAL COLLEGE OF PHYSICIANS.

IN consequence of the attendance of the President, Sir Andrew Clark, Bart., being required at Cambridge on Tuesday, the 10th inst., when it is proposed by the University to confer on him the honorary degree of LL.D., Professor Ferrier's second Croonian Lecture, which had been fixed for that day, stands postponed to Thursday, the 12th inst.

"VACCINATION" FOR YELLOW FEVER.

DR. DOMINGOS FREIRE, of Rio de Janiero, has been prosecuting his experiments in "vaccination" for the "vomito nigro," and has recently published an account of their results. His "vaccinations" were carried out with attenuated cultures of a microbe, which he believes to be the pathogenic agent of the fever, and the opportunity of which he availed himself was the epidemic of that disease prevailing in 1888-89. The number of those vaccinated amounted to 3525, and the general mortality did not exceed 0·79 per cent. From 1883 to 1889 Dr. Domingos Freire has vaccinated for the "vomito nigro" 10,518 persons, and of these the percentage of deaths was only 0·4.

THE NATURE OF "NONA."

FROM his observations of two cases of so-called "nona," both of which were fatal, Dr. Tranjen of Sistova (Bulgaria) believes that the affection popularly described under that name is really infective *cerebro-spinal meningitis* (*Berlin. Klin. Woch.*, No. 22). Both these cases exhibited coma rather than symptoms of cerebral irritation or paralysis. So-called "nona" would then be nothing but a cerebro-spinal meningitis of abnormal type; and the occurrence of such atypical cases after epidemics of influenza and pneumonia is, Dr. Tranjen thinks, easy of explanation. Even if the view put forward by A. Kühn, that influenza is not a disease *sui generis*, but only a rudimentary or larval form of pneumonia, be not accepted, it is yet a fact that pneumonia is always largely increased during influenza times. It may be that influenza has the power of modifying micro-organisms or their soil, so that the diseases excited by it are often nearly unrecognisable. Hence cerebro-spinal meningitis, which is, in its etiology, closely allied to pneumonia, may *a priori* be expected to be, like that affection, influenced more or less by influenza.

THE UNIVERSITY OF LONDON.

THE Senate had under consideration on Wednesday the scheme of their special committee for the reconstitution of the University, and made several amendments therein, which will be forwarded to University and King's Colleges and the Royal Colleges of Physicians and Surgeons.

THE BRITISH MEDICAL ASSOCIATION.

THE arrangements for the fifty-eighth annual meeting of the British Medical Association (under the presidency of Dr. W. F. Wade, senior physician to the Birmingham General Hospital), to be held in Birmingham on July 29th, 30th, and 31st, and August 1st next, are making satisfactory progress. There will be three addresses: an address in Medicine, by Sir W. Foster, M.D., M.P., of Birmingham; an address in Surgery, by Mr. Lawson Tait, F.R.C.S., of Birmingham; and an address in Therapeutics, by Dr. W. H. Broadbent of London.

MAY SUNSHINE IN 1890.

THE amount of sunshine in the unusually brilliant month recently ended has naturally been the subject of general comment, and it has been noted that at Eastbourne 266·9 hours of bright sunshine were recorded in May, exceeding the average for the corresponding month in the preceding five years by more than forty-five hours. It may, however, be pointed out that even at the Royal Observatory, Greenwich, well within the zone of London smoke, the recorded amount of bright sunshine was 223·9 hours, and was equal to more than 47 per cent. of its possible amount—that is, of the hours during which the sun was above the horizon. This amount at Greenwich exceeded the average amount in the corresponding month of the previous ten years by more than forty-one hours; and since 1877, when the amount of sunshine was first recorded, has only been once exceeded—namely, in 1882, when the May record was 237·8 hours.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE election of President, Vice-president, Secretary, and Council took place on June 2nd. The two candidates for the presidency were the Vice-president, Mr. H. Gray Croly, and the outgoing President, Mr. Austin Meldon, the former being elected by a majority of 37 votes. The new President, Mr. Croly, is a most distinguished surgeon, and in every way fitted to fill the high position to which he has been elected by the Fellows. He is senior surgeon to the City of Dublin Hospital, consulting surgeon to Monkstown Hospital, ex-President of the Irish Medical Association, &c. A contest also took place for the vice-presidency between Mr. Moore and Mr. Carte, J.P., the latter being successful by 20 votes. Mr. Colles was re-elected Secretary without opposition, and the only addition to the Council was the name of Dr. C. Ball, who fills the vacancy caused by the retirement of Mr. Robert Moore. There were 242 votes recorded at this election, being one more than at last year's election, three being spoiled votes. The result of the election for President and Vice-president having been declared, Dr. Jacob (Maryborough) proposed a vote of thanks to Mr. Meldon for the able and dignified manner in which he filled the office of President during the year. This was seconded by Mr. Wheeler, and adopted amid applause.

THE APPROACHING ELECTION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT the election of members of Council of the Royal College of Surgeons on July 3rd there will be three vacancies to be filled, caused by the resignation of Messrs. Croft, John Marshall, and Power. For these there will be several candidates, and the names of seven who are expected to apply are already mentioned: Mr. W. Mitchell Banks (Fellow, 1869), Mr. Marcus Beck (Fellow, 1869), Mr. Edward Bellamy (Fellow, 1867), Mr. R. Brudenell Carter (Fellow, 1864), Mr. John Langton (Fellow, 1865), Mr. Walter Rivington (Fellow, 1863), and Mr. Lawson Tait (Fellow, 1871).

FOREIGN UNIVERSITY INTELLIGENCE.

Heidelberg.—Dr. Kopp, Professor of Chemistry, is about to retire.

Messina.—Dr. Mazzitelli, Extraordinary Professor of Syphilis and Dermatology, has been promoted to a full Professorship.

Naples.—Dr. A. Piutti, Extraordinary Professor of Pharmaceutical Chemistry, has been promoted to a full Professorship.

Palermo.—Dr. A. Angelucci, Extraordinary Professor of Ophthalmic Surgery, has been promoted to a full Professorship.

Rome.—Dr. Sergi has been appointed Professor of Anthropology.

Siena.—Dr. Barduzzi has been promoted to the Professorship of Syphilis and Skin Diseases.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Ernst Graeber, Assistant Medical Officer of the Children's Clinic in Munich; Dr. Bergonil, Professor of Medical Physics in Bordeaux.

AT the recent anniversary meeting of the Linnean Society Professor Huxley, the *Athenæum* states, was awarded the Linnean medal. This medal was instituted three years since, with a view of conferring honour on distinguished biologists. On the first occasion, which was the centenary celebration of the Society, two medals were bestowed, one on Sir Richard Owen, the other on Sir Joseph Hooker. Last year the award was made to a botanist, Professor Alphonse de Candolle.

TUSCANY, already rich in hospitals, has just added two more to the number—one at Tizzana, founded by private bequest, with concurrent aid from the Communal Council; and the other at Figline, erected by Count Alfredo Serristori, near the old one, which dates from 1399. Of these the Serristori Hospital has been pronounced, on the excellent authority of Professor Federici of Florence, to be, in construction and internal arrangements, quite a model.

THE Austrian Minister of the Interior has, it is stated, ordered the mayors and trustees of all cities and towns in the Austro-Hungarian Empire to report to the Department of the Interior all facts in connexion with the late influenza epidemic.

AT the approaching Encænia of the University of Oxford, the honorary degree of D.C.L. will be conferred on Sir William Turner, Professor of Anatomy at Edinburgh University.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

FRIDAY, MAY 30TH.

MR. MARSHALL, PRESIDENT, IN THE CHAIR.

ON the motion of Sir DYCE DUCKWORTH, the report of the Examination Committee was received, and entered as an appendix to the minutes.

THE REPORT OF THE EDUCATION COMMITTEE.

Exemption of Graduates from the Fifth Year.

On the motion of Mr. WHEELHOUSE, the Council resolved itself into a committee of the whole Council, and resumed its consideration of the recommendations of the Education Committee, and at once proceeded to consider Sir William Turner's motion to add the following words to Dr. Pettigrew's resolution: "That graduates in arts or science of any University recognised by the Medical Council who shall have spent a year in the study of physics, chemistry, and biology, and have passed an examination in these subjects for the degree in question, should be held to have completed the first of the five years of medical study."

Sir WILLIAM TURNER, in moving the resolution, referred to a resolution passed by the Council on Thursday, providing that the first of the five years of study might be passed at a teaching institution recognised by any of the licensing bodies where the subjects of physics, chemistry, and biology were taught. If his motion were approved, it would put the matter into a specific form. Dr. Pettigrew suggested that the words "before or after registration" should be introduced into the motion before the Council, and he thought the introduction of those words would be useful, because men often prepared themselves in graduation for arts and science without having the idea of ultimately going in for medicine, and he considered that the study of these subjects preparatory to obtaining a degree in arts might be taken before registration.

Dr. PETTIGREW seconded the motion, and said it was a matter of great importance that medical men nowadays should be well educated and encouraged to take arts and science degrees before becoming medical men, and that it would be unfair to require such medical students to study the same subjects twice.

Dr. STRUTHERS characterised the motion as a very serious proposal, as giving a kind of exemption or privilege to University students. He did not want to discourage graduation in arts and science, but there was no occasion for such exemption in the case of University students. The Branch Council knew very well how many cases were annually received of students wishing to be antedated. Would anyone tell him that a University student engaged for two years in preparing for an arts degree was not able to pass the preliminary examination in general education? By this motion they were allowing the general education to overlap the professional education. He proposed as an amendment: "That a year spent in the study of physics, chemistry, and biology by students in arts or science of any University recognised by the Medical Council, after having passed a preliminary examination in general education recognised by the Medical Council, will be regarded as the first of the five years of professional study."

Sir JOHN SIMON seconded the amendment *pro formâ*, and suggested that the previous motion should be withdrawn, as it had already in substance been accepted by the Council.

Dr. LEISHMAN hoped Sir William Turner would press the motion with some modifications. The motion proposed that a year spent in studying physics, chemistry, and biology by graduates in arts should be regarded as one of the five years of medical study, but made no provision for ascertaining the degree of proficiency attained in these subjects. He recommended for consideration whether it would be preferable to enact that graduates in arts or science of any recognised University, provided an examination in physics, chemistry, and biology formed a part of the examination for the degree in question was held in these subjects, should be exempt from these subjects.

Sir WILLIAM TURNER accepted this suggestion, and withdrew his original motion in favour of it.

Mr. MITCHELL BANKS supported Sir W. Turner's motion because he thought a man with a degree in arts and science,

and who had been examined in these subjects, did not approach the study of medicine by a side door, but through a splendid portal and in the very best possible way.

Sir JOHN BANKS remarked that, *prima facie*, this motion appeared to be in the right direction. In London they were trying to throw back those subjects to the earlier period of study.

Dr. HERON WATSON referred the Council to Sir Dyce Duckworth's motion, that the first year might be passed at the University or teaching institution, recognised by any of the licensing bodies, where the subjects of physiology, chemistry, and biology were taught, but did not say a word as to whether the students attended or were examined upon these subjects. He suggested that the motion should be put into such a form as to include other bodies as well as Universities, and to correct the error made in Sir Dyce Duckworth's motion of yesterday. He thought the "inchoate matter" of the motion should now be incorporated.

Dr. STRUTHERS said what the committee wanted was to see that the work done in that year was really given to science. In both arts and science the preliminary examination was the same.

Sir WM. TURNER pointed out that students did not differentiate into arts or science until after having finished the purely literary and mathematical subjects. He called attention to the word "spent" in his motion, which implied that attention was directed to the study of the subjects, and which entirely provided for Dr. Watson's objection.

Dr. PETTIGREW thought that Dr. Struthers had misinterpreted the motion as originally put, which implied that the year devoted to these subjects would be devoted to their study necessarily and naturally. He quite fell in with Dr. Leishman's amendment.

Dr. CAMERON, in supporting the motion, offered one further argument which had not yet been noticed. Dr. Watson had warned them yesterday as to what might be the cumulative effect of all their recommendations, and it came to something like this: that a man's life work might possibly be found to begin about the time when he ought to die, and he thought that a proposal of this kind, which gave a certain number of students, who had been honestly undergoing the scientific training required, an opportunity of saving a year, ought to be supported.

Dr. HAUGHTON moved as an amendment that the motion should only apply to British Universities, as he did not know anything about the Universities in Timbuctoo or the Cape of Good Hope.

Mr. MACNAMARA wished to know if the Council was going back upon what had been decided, that five years of training should be undergone after registration as a medical student. Were they going to allow certain students to bring up certificates of exemption in the face of a resolution which he thought had been accepted by all the members of the Council?

The PRESIDENT said, if he understood the question correctly, every University student was required to pass an introductory examination, whatever it might be called, so that in passing this resolution they did not interfere with the professional preliminary examination.

Dr. MACALISTER suggested the words "the passing of a sufficient preliminary examination" should be introduced into the motion.

Dr. Struthers amendment was then put and negatived, and the resolution of Sir Wm. Turner became the finding of the Council.

The Question of Special Hospitals.

Dr. STRUTHERS next moved Resolution 3 of the report of the Education Committee, which was: "That the fifth year should be devoted entirely to clinical work at a general hospital or public dispensary recognised by any of the licensing bodies mentioned in Schedule A of the Medical Act (1858) or as pupil to a registered practitioner." He stated that the matter had been carefully considered, and they recommended any one of the three methods of passing the fifth year. They had experienced a difficulty in fixing the limit because of the various methods employed in different parts of the country.

Mr. BRUDENELL CARTER proposed an amendment to the effect: "That the words 'a general hospital or public dispensary' be replaced by the words 'one or more public hospitals or dispensaries.'" He thought the recommendation of the committee would limit the work of the students to one single hospital. Now, there was a good deal of post-graduate teaching going on in special hospitals, and he thought this was analogous to what was recommended to fifth-year students. He enumerated the various hospitals so engaged, and it appeared to him that clinical study in any of these should be recognised by the Council and accepted as fulfilling the requirements of these recommendations of the Council, and that the motion before them should be enlarged in the manner indicated by his amendment.

Dr. TUKE took a much wider objection to the recommendation, which was, in some respects, ridiculous. They required that these hospitals were to be recognised, but the registered practitioner, whom they were proposing to allow to take charge of students for the last year of their education, was not to be recognised by any person. The value of the fifth year would be entirely destroyed unless restrictions were placed upon these persons. A great many safeguards should be devised by the Council; and, in order to give a basis for that, he moved, "That the fifth year should be devoted to clinical work, according to the terms of the recommendation, and that the registered practitioner should be one holding a public appointment recognised by the Council."

Mr. WHEELHOUSE objected to the words "special hospital" in Mr. Brudenell Carter's amendment.

Dr. PETTIGREW also thought it was a misfortune to have the words introduced, and hoped the Council would be careful about accepting them.

Mr. MACNAMARA thought if a student elected to attend for twelve months at the special hospital with which he was connected, it would be one of the saddest things he could do.

Dr. BRUCE seconded Mr. Brudenell Carter's amendment, because it was his opinion that this extra year ought to be passed in such a way as the student would best like to devote his time. He thought many men would take up the study of specialties, and it was unfair to tie the student down for another year to the same sort of hospital as that in which he had already passed four years.

Dr. MACALISTER showed that the principle of special hospitals had already been recognised by the Council in the case of the Ophthalmic and Lying-in Hospitals, and he thought it would be peculiar if they were to turn their backs upon their own recommendations.

Dr. LEISHMAN thought the student should be allowed the greatest latitude. In some parts of the country institutions existed which were called special hospitals, perfectly respectable, but he felt that many of them were not places to which they would like students to go.

Mr. MACNAMARA considered it necessary that the fifth year should be devoted to clinical work in such a manner as the medical authorities in the three divisions of the kingdom shall approve. The system of pupilage might be desirable in England, but would prove unworkable in Ireland. It would save a great deal of discussion on this subject if that idea were accepted.

The PRESIDENT thought there could be no doubt that it was better not to be too restrictive in a motion of this kind, and that the students should be encouraged to avail themselves of the instruction provided in special hospitals.

Mr. Brudenell Carter's motion was then agreed to by the committee.

Discussion on the Pupilage Question.

Dr. MOORE moved: "That the words 'or as pupil to a registered practitioner' be omitted." He held that a moderately clever student could within a very short period of time master certain sciences, but as regards clinical work that was a kind of knowledge which was of slow growth. He maintained that when the student joined the medical profession he should, simultaneously with his scientific studies, carry on his clinical work in the wards. The clinical material should be utilised from the very beginning of the professional career. The public dispensaries in Ireland were too crowded to enable clinical instruction to be given satisfactorily, and many of the finer diagnostic points in the more occult diseases would be overlooked by the student, because it was a sealed book to the great majority of these public practitioners, and he could not look upon that as a good field for instruction. He could not see how the registered practitioner in England could keep abreast with the scientific improvements of to-day. But if he was to act as tutor or instructor to the fifth-year's student it was absolutely essential that he should have such knowledge as it was indispensable to

the pupil. He thought the pupil would in the end sink down to the position of an unqualified assistant.

Dr. KIDD, in seconding the proposition, believed that to allow the student to pass the best year of his time as pupil to a registered practitioner would be a most fallacious and wasteful method.

Mr. WHEELHOUSE said that in framing this resolution several points were taken into very careful consideration. First of all, the student had been in the hands of skilled and trained teachers in the hospital for three years, and had therefore had an opportunity of seeing what the general hospital could afford, and in the best way in which he could possibly see it, under the eyes and direction of those teachers. But a great many things were never seen in a hospital. People suffering from chronic complaints could not go into a hospital, and it was also impossible to see diseases which occurred in very early, or the ailments or diseases of very advanced, life. Many disorders were not admissible into the hospital, and it was in order to provide for such cases that the committee had made their proposal. They thought that if the three plans embodied in the resolution were adopted, sufficient latitude to meet the cases of the various portions of the kingdom had been provided. They had given the recommendation with a view of enabling the student to spend his fifth year in seeking such information as could not be given in the hospitals.

Dr. GLOVER hoped that the result of the discussion would be to give a very firm and decided negative to the amendment. Dr. Moore seemed to think it was impossible to acquire any knowledge at the dispensaries in Ireland, but for his part he held the highest opinion of the Irish physicians. He had been in Ireland, and had never got better instruction than in a dispensary—for diseases of children—there. Not only did Dr. Moore want to blot out the word "dispensaries," but also the words "registered practitioner." The opinion seemed to prevail that there was but little to be got out of the practitioner as a teacher. It was rather strange that hospital physicians and surgeons, who had had these men in their hands for so long a period, should have any doubt about the ability of their own pupils to convey some very important lessons. He pointed out that in the profession of law pupilage took an important place in the education of the student—five years' pupilage being required, and in the case of graduates three years. He submitted that this amendment was disrespectful to the general practitioners of the kingdom. Mr. Macnamara had said that the system was impracticable in Ireland. Well, the recommendation did not render it absolutely necessary that students should have this pupilage. If it was impracticable in any locality it could be done without, but where it was practicable they wished to hold out the opportunity for the student to take advantage of it if he thought fit. It was said that the registered practitioner was a very variable creature, and there seemed a feeling that we should at any rate qualify this expression, and should only permit the privilege to be granted to those practitioners who could show that they possessed qualities and facilities for taking pupils. He was willing to provide safeguards, either by requiring such practitioners to hold a public appointment or to have such opportunities of imparting practical knowledge as would be satisfactory to the examining bodies.

Sir JOHN SIMON said the Council had already accepted the principle of allowing individual practitioners to assist in the education of the profession, but the principle would have to be limited by the approval of the licensing bodies. Perhaps visitation of those practitioners would meet the case. It seemed to be idle to talk of the recognition by this Council of the individual practitioner.

Mr. MACNAMARA had been a dispensary doctor himself, and knew the working of the system, and to say that it was possible to give satisfactory instruction there was Utopian. He had no wish to strike out the words "registered practitioner" as applied to England or Scotland, but he objected to it as unsuitable for Ireland. He was not throwing a slight upon his professional brethren in Ireland, who were engaged in these duties, but he said there were not the means at their disposal of discharging such duties in Ireland. He proposed to substitute the words "in such a manner as may seem fit to the medical authorities in the three divisions of the kingdom, subject to the approval of the General Medical Council." Home rule in this question was most desirable.

Dr. HAUGHTON seconded this proposal.

Sir W. FOSTER was certain that the dispensaries in Ireland were even more favourably situated as fields for teaching than the out-patient departments in English hospitals, because the number of patients was not so numerous. He found plenty of students deeply versed in the theory of medicine who did not know much about the art of it.

Mr. COLLINS, as a general practitioner in Ireland, said his assistants and pupils had large opportunities of learning many diseases which could not be taught in hospitals, and thought it was an important matter for a young man to spend some part of his time in that way.

Mr. TEALE said his original opinion was in favour of the view Dr. Glover had enunciated, and that it was of great importance to afford facilities for giving students every opportunity for acquiring instruction under a general practitioner.

The PRESIDENT pointed out that they had already admitted the possibility contemplated in the last two resolutions, but the rule had virtually been a dead one, so far as his knowledge went. There were large colliery practices in England where the practitioners had ample facilities for imparting most excellent surgery. It seemed to him the only difference was between the six months and a whole year, but the principle had been conceded and was acted upon by the two Royal Colleges of England. So that in this proposition there was no departure from what the College had already done when it permitted "six months with a registered practitioner having such opportunities of imparting practical knowledge as shall be satisfactory to the examining board" to be recognised. The words "subject to the approval of the General Medical Council" might leave the Council in very great difficulties, and should be struck out from Mr. Macnamara's motion.

Mr. MACNAMARA assented.

Dr. HERON WATSON reminded the Council of the recommendation of May 26th, 1888, as to the registered practitioner constituting a competent teacher. Against the registered practitioner being a most admirable person he had nothing to say, but that did not make him an admirable teacher of young men. In point of fact, the better he was as a practitioner the less time he would have to spend in teaching, and the young man would come to be nothing but an unqualified assistant. In 1883 this subject had been considered by a committee, which placed before the Council extracts and certain statements which led to a resolution being come to by this Council that it was not a satisfactory condition of matters. He had no hesitation in saying that the unqualified practitioner and the unqualified assistant were one and the same thing. It came to nothing else than the amount of efficient control which was to be given on the part of the registered practitioner. Dr. Watson then read selections from the report referred to above, and said that this motion sought to reintroduce a condition of things which he had hoped they had seen the last of.

Dr. GLOVER, interrupting, pointed out that the Council had already drawn a wide distinction between a pupil and an unqualified assistant.

Dr. WATSON continued to read from the volume referred to, showing in detail what base uses had been made of the unqualified assistant, characterising him as the living representative of the page of the middle ages and the apprentice of the last generation. Any scientific or systematic employment of his mind appeared to be impossible. To suppose for one moment that hospital practice properly carried out was to be compared to the casual information that might be communicated by the general practitioner who had a pupil of that kind appeared to him disgraceful. There were, no doubt, admirable practitioners throughout the country who might be possessed of such qualities as amiability, kindness, and excellence of every kind with whom to live in the same house and sit at the same table would be a lesson in itself. But it was clinical medicine and surgery that they wished the pupils to be taught, and not merely to go and pick up what by chance they might. He hoped, therefore, that Dr. Moore's amendment would be carried.

Dr. MITCHELL BANKS rather thought that the Council would be breaking faith with the general medical public if they utterly refused to consider this matter. A fifth year had been provided largely through Dr. Glover, Mr. Wheelhouse, and others, who had shown that the students were not sufficiently practically educated, and it would be unfair to disappoint the hopes excited in the minds of the English practitioners and in the press. He thought the distinction between an unqualified assistant, who was the drudge of the doctor, and a pupil, who would perhaps have to pay

for his education, was very manifest. He would be glad if the Council could see their way to support this motion.

Dr. BRUCE said if sufficient care were not taken a certain number of qualified men would get into practice without being fit to do so. In the twenty-sixth volume of the Minutes (1888) it was recorded, in a letter written by Dr. Somerville, that the vast majority of qualified men whom he had employed were wanting in knowledge of the practical work. He was bound to say that a great many men possessed of their diplomas were not fit to be trusted with a patient's life. He thought it was very important for a man about to pass into practice to have some idea of business, and to be able to go about the work systematically. As a pupil he would learn to have more sympathy with the patients and to understand their ways of looking at things, and to develop that feeling of humanity which was scarcely ever met with in our hospitals.

Dr. STRUTHERS considered that those attached to the larger Universities were apt to look down on the country practitioners, and would like to get hold of the young men for another year to "polish away at." He suggested that they might send him away for half a year only. The best men he had met with in the medical profession were the general medical practitioners.

Dr. KIDD thought they should compromise this question, and reserve the fifth year for the best class of education they could provide. The matter would come up again on the report. Let them give six months in an early stage to pupilage if required, but the fifth year should be taken up by putting the finishing touch upon the student by the best teachers.

Mr. BRUDENELL CARTER said the gentlemen who under the recommendations of the committee would go as pupils to practitioners were those who now go to the examining bodies to become qualified persons. The Council was not therefore sanctioning the employment of the ignorant unqualified assistant, but of gentlemen who were virtually, as far as education was concerned, on a level with their employers, and that distinction ought not to be lost sight of. He attached great value to the instruction which might be given by the general practitioner in this country. He thought the training by the medical practitioner was especially useful in accustoming the student to deal promptly in all sorts of emergencies. The country practitioner was deprived of many resources which surrounded the hospitals—the facilities for obtaining consultations &c.—and was generally speaking one of the most important members of the profession, simply because he had been compelled all his life to think and act for himself. He fully concurred in the necessity for surrounding the proposal with some kind of safeguard, such as that the general practitioner should have satisfactory means of instruction, and also that he should be a man of sufficient character to be entrusted with the care of pupils. He cordially voted for the amendment of Mr. Mitchell Banks.

Dr. MOORE'S amendment, having been put to the vote, was declared to be negatived.

On Dr. HERON WATSON'S requisition, the names of those who voted for and against the amendment respectively, and of those who did not vote, were recorded, and it appeared that there voted 16 against Dr. Moore's amendment, 9 for it, 4 members did not vote, and Dr. Heath was absent.

Restriction of Registered Practitioners.

Dr. TUKE'S motion was next submitted to the Council in the following terms: "That the fifth year should be devoted to clinical work at one or more public hospitals or dispensaries recognised by any of the medical authorities mentioned in Schedule A of the Medical Act (1858), provided that of this year six months may be passed as a pupil to a registered practitioner holding a public appointment, or possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities."

The amendment was declared carried, and having been put as a substantive motion,

Sir WALTER FOSTER moved as an amendment: "That Recommendation 3 stand as follows: 'The fifth year should be devoted to clinical work at one or more public hospitals or dispensaries recognised by any of the medical authorities mentioned in Schedule A of the Medical Act (1858), or as pupil to such registered practitioner, either holding a public appointment or having such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities.'" He moved this as Dr. Tuke's motion practically took away from the student that liberty which it was wished he should enjoy as he might think best suited to his own requirements.

Mr. WHEELHOUSE seconded the amendment.

On the amendment being put, 15 voted against it, 10 for it, 3 did not vote, and 2 were absent. Dr. Tuke's motion, therefore, became the finding of the Council.

SATURDAY, MAY 31ST.

Report of the Pharmacopœia Committee.

The minutes of the previous meeting having been read and confirmed, Dr. QUAIN moved that the Report of the Pharmacopœia Committee be adopted and entered on the minutes.

Restriction of Systematic Lectures.

The Council, having resolved itself into a committee, continued the consideration of the recommendations of the report of the Education Committee.

Dr. LEISHMAN moved recommendation No. 4: "That the number of systematic lectures in each course, especially in winter, may with great advantage be restricted to two or three weekly, and that the time so gained should be devoted to class examination, tutorial instruction, or practical work." He stated that the question of the diminution of systematic lectures had already been before the Council in the form of a motion which especially referred to the considerations of the committee. It was a subject which had particular significance in the north, where regulations existed rendering it absolutely imperative that the teacher should convey his instruction to pupils in that particular form. At the same time he wished to see that the time saved in that way would be suitably employed. He proposed not to diminish in the slightest degree the time which the individual teachers gave to the work, but, on the other hand, to leave that time open to them to use as they thought best. It was proposed, therefore, that the regulations should in future leave it open to the teacher to convey as much information as he could and to what extent he chose in the form of lectures, class examinations, practical illustrations, or tutorial work.

Dr. PETTIGREW seconded the motion, and wished to know whether, in the event of this recommendation being carried, any lecturer would be precluded from giving his hundred systematic lectures.

The feeling of the Council was that it did not preclude him from so doing if he chose.

Dr. STRUTHERS said that in Scotland this was a very important question, and he would like to point out the bearings of it, the more so as the laws of the University were about to be recast by a committee now sitting, who would no doubt like to hear the opinion of the Council regarding medical education. He referred to Table 5 to the report of the committee of last year, which gave an epitome of the number of lectures given at the various London and provincial medical schools and colleges. This table showed that three lectures a week was the maximum number in England and Ireland, whereas in Scotland teachers were forced to establish a regular daily system of lecturing. It was not necessary nowadays to argue against too many lectures, as the subject was threadbare, and the Medical Council quite well understood the relative value of systematic lecturing and practical education. What could possibly be the use to a student of sitting out a hundred lectures on materia medica?

The PRESIDENT.—Your remark seems to me to coincide with the motion, and not to be opposed to it.

Dr. STRUTHERS, continuing, did not see why the lectures should be removed in winter and permitted in summer, and would not like the value of this recommendation to be thinned away, but to stand out in its simple nakedness for the Scotch mind to take in, because the idea was quite new in Scotland. He would not make an exception in the case of anatomy.

Dr. QUAIN thought it was injudicious to interfere in the methods of teaching adopted by the teachers whom they had accepted as competent. He suggested that the reference to hours might be struck out altogether. It would only embarrass and trouble the teachers.

Dr. HAUGHTON thought that Dr. Struthers and the committee ought to be supported. In Ireland they did not suffer from lecturing, which had been replaced by practical instruction there. He should support the motion loyally and cordially that the interminable dribble of words that flowed from the teacher's lips might be stopped, and that

the intelligent student who could not learn the substance of fifty of the lectures should not be compelled to attend a whole hundred. If the question of fees was considered, that could be easily settled.

Mr. BRUDENELL CARTER did not think lectures should be condemned too unreservedly, and proposed to leave the matter to be settled by the individual schools and the individual teachers.

Dr. LEISHMAN thought that the main position had been overlooked. The reference of the committee was that, in order to afford due time for clinical work, it was desirable that the number of lectures should be restricted, leaving the matter of restriction to be considered at a subsequent meeting of the Council. It might be a good suggestion or a bad one. He agreed with Mr. Brudenell Carter that there seemed to be a tendency to undervalue the position of lecturing as a means of teaching. He had actually heard it said that it would be better not to have any lectures at all. Many men found that by this system they were able to convey a considerable amount of information to students which was not to be found in books. In Scotland they were desirous of getting rid of the incubus of the obligation to deliver a certain statutory number of lectures on a subject, whether it was desirable or not. He entirely disagreed with the position which Dr. Struthers took in regard to this matter. He wished to divorce the subjects of class examination and practical work from the connexion which necessarily existed between them and systematic lectures. When students heard individual questions, extending in the course of a year over the whole range of the subject, answered *vivâ voce*, they saw wherein they had failed to understand the subject. A student might sit listening to lectures hour after hour, and it was difficult for many of them to sustain their attention (a strain which was very much lessened by oral examination), and that, taken along with lectures, was most important. The meaning of practical work was defined in the recommendations of the committee, and he should be sorry to see that part of it cut out, as it would deprive it of what it was intended to convey—the idea that the teacher should devote a certain amount of time to instruction, and what time he chooses to lectures, examination, or practical work.

Sir WILLIAM TURNER pointed out that in the month of May, 1888, the Council adopted recommendations with a view to afford more time for clinical work. It seemed that this resolution was merely a repetition of it with a slight difference—namely, that it descended upon details, and it was this descension upon details to which he objected. The subject should be left to the educational bodies themselves, who best knew the particular requirements of the school and of the division of the kingdom in which it was situated. That was the present attitude of the Council, and he held it to be a wise and judicious one. As regarded Scotland, the number of lectures per week was sanctioned by long practice and tradition, and seemed to suit the genius of the people. That practice would never have been continued if the people had not been satisfied with it; and if the Scotch people wished to alter the practice, they need not come to the Council to work it out and lay down regulations for them, because at the present time there was an Executive Commission sitting armed with the fullest powers. If the Scotch public wished to have the number of lectures reduced by statute, all they had to do was to ask the Executive Commission to do so. He proposed an amendment embodying his suggestions.

Dr. HERON WATSON seconded this amendment, as it seemed better that the individual bodies should have it in their power to modify the regulations to suit the requirements of the locality or the conditions of the students with whom they had to deal.

Mr. MITCHELL BANKS said he had heard of a terrible death, he believed the worst known, that of being preached to death by wild curates; but one of the most awful inflictions imaginable was that of being lectured to death by Scotch professors. He had narrowly escaped that fate. It was only due to a naturally strong constitution that he had survived the lectures on botany, zoology, and chemistry inflicted upon him twenty-five years ago.

Sir JOHN SIMON thought they could not entirely ignore the recommendations of the committee, but it was clear that they ought not to regulate the arrangements of individual schools. In order to secure the maximum of liberty to the students, he moved: "That the regulations requiring attendance on systematic courses of lectures ought not to require attendance on more than two or three lectures weekly in any one course, nor to involve attendance beyond two or three subjects on any one day."

Dr. PETTIGREW agreed with Sir John Simon as to the necessity for protecting the student. Of late years the number of practical classes had enormously diminished and Dr. Leishman's proposal would cover them.

Dr. GLOVER said he should like to carry Sir William Turner's consent to the proposal. Sir William Turner had called attention to the fact that changes were anticipated in regard to the Scottish Universities by the Commission now sitting, and that formed an argument in favour of the recommendation, because he felt sure that any expression of opinion on the part of the Council would receive the best consideration of that Commission.

Sir GEORGE MCLEOD said he had carefully abstained from taking part in the discussion, because almost every point had been brought out by other members. He thought that, in determining how much time should be devoted to practical or clinical teaching, they should take into consideration that, if systematic teaching was too much diminished, clinical teachers would then become systematic teachers. In order to make students understand what was being taught it was absolutely necessary that the principal points should be taken and discussed in the class. He confessed that a great deal of confusion existed as to what was meant by systematic teaching, which was now conducted in a manner very different from that of twenty years ago. He declined to admit that text-books could form a substitute for systematic teaching. The outcry for clinical teaching at the present time had almost degenerated into slang expressions. His impression was that, if the Council adopted Dr. Leishman's proposal, it would best meet what was required—at any rate, so far as the Scotch schools were concerned.

Mr. MACNAMARA said that students of the present day never dreamt of opening a real text-book, but devoted their attention to cram books, or mere epitomes which came within the reach of their pockets. Whilst he admitted that systematic lectures were very useful, he strongly advocated the benefits to be derived from practical instruction.

Sir JOHN SIMON said that if the examining authorities required courses of lectures of undue length or in undue number the same effect was produced, and it was only against compulsion of that kind that his amendment was directed.

Dr. STRUTHERS withdrew his motion in favour of Sir John Simon's amendment.

The amendment was carried, and on being put as a substantive motion was agreed to.

The Practical Course to be Certified.

The fifth recommendation of the Education Committee was next embodied in an amendment moved by Dr. STRUTHERS and seconded by Mr. WHEELHOUSE, and agreed to by the Council:—"That due time should be set aside for practical work in the various subjects. Attendance on a practical course should be carefully ascertained and certified. By a practical course is understood one in which work is done by the student himself, under the direction of a duly qualified teacher."

Regulations for Clinical Instruction.

Dr. STRUTHERS next moved the sixth recommendation: "That, in order to promote a practical system of clinical teaching, the regulations should specify 'hospital practice with clinical instruction.' Ample time should be set aside for hospital work, and means should be taken to ascertain regularity of attendance in the wards and out-patient departments. Every candidate for the final professional examination at the end of the fifth year should be required to give evidence that he has had sufficient opportunities of practical study, and has acted as clinical medical clerk and surgical dresser at a recognised hospital."

Dr. HERON WATSON asked if they expected a student to keep up these subjects a whole year without being examined upon them.

Dr. WILKS pointed out that in London great care was taken to ascertain the attendance at hospital work.

Mr. TEALE said that in Leeds a system such as was now proposed had been most thoroughly organised.

Dr. KIDD then moved: "That all the words after 'departments' be omitted, and that there be inserted, 'All certificates of hospital attendance should certify that the candidate has had sufficient opportunities of practical study, and that he has taken records of cases and dressed surgical cases to the satisfaction of the physicians and

surgeons in charge, stating the number and nature of the cases so attended to, such statements to be certified by the physicians and surgeons under their hands.'" He said his experience at hospitals showed the desirability of ascertaining whether or not a student had done a satisfactory amount of hospital work, and he thought his proposal would meet the present difficulty of getting students to avail themselves of the opportunities afforded them for practical study. He had been told by Dr. Finlayson that in Glasgow it was the practice to have clinical clerks or dressers appointed to half a bed, which he considered very unsatisfactory.

Dr. MOORE, in seconding the motion, thought that the only way to induce students to study was to let them know that they would be subjected to a thoroughly strict clinical examination.

Sir GEORGE MCLEOD said he thought there would be no difficulty in getting students to attend if the teaching was made interesting. As to Dr. Finlayson's remark, what was meant was that two men were appointed to dress one patient on alternate days.

Sir JOHN SIMON did not think it necessary to discuss the amendment; he had no doubt the authorities would see the requirements were fulfilled.

Sir WALTER FOSTER again observed that the great defect of the report of the Education Committee was that it went too much into details. He thought that in trying to teach the teachers how to teach, they were taking a wrong view of the whole subject.

The amendment was negatived, and the original motion was put to the vote and agreed to.

The Teaching of Infectious and other Common Diseases.

Dr. GLOVER moved that the following schedule form an addendum to Recommendation 6 of the Education Committee:—

*Diseases.	Number of cases seen by the candidate.	Period of such studies.	Certification of practitioner or teacher under whose supervision such cases have been seen.
Infectious diseases:			
Continued fevers ..			
Scarlet fever			
Diphtheria			
Measles			
Infantile diseases ..			
All sorts of ordinary cases — General practice			
Insanity			
Midwifery and puerperal and gynæcological disease ..			
Eye disease			
Skin disease			

* The infectious diseases not to be studied at the same time as that at which the student is attending midwifery or puerperal cases.

He said they had no intention of interfering with the lecturers. He appealed to the report of the Examination Committee in regard to the matter of infectious diseases, in which the statement was made that "the examination in such diseases of a clinical kind is not often practicable." In the next sentence the Examination Committee exhibited a delightful complacency with the condition at which practical examinations had arrived, and expressed the opinion "that the examinations in the whole range of medicine and surgery can never be made complete or exhaustive"; that was to suggest, they had gone as far as they could. What they were trying to do was to give precision and definiteness to medical education; but on certain points, on which he hoped to show the Council, it had heretofore been deficient. He felt himself deeply responsible for this long and costly discussion, and thought that if it was to be justified at all it would be in the degree in which they could improve the practical part of medical education. He was exceedingly anxious to induce the Council to accept this schedule in order to emphasise clinical work and make students understand that the more cases they could see in a continuous way the better. This group of diseases had not been chosen at random. Several members of the Council might remember the statement he submitted last year, founded on the reports of our inspectors, in which he tried to point out some of the defects of the existing clinical examinations, he had every reason to believe, to the satisfaction both of the Council and of many outside who might be regarded as high authorities. They would see that he showed last year the existing examinations ignored almost entirely the very diseases put into the schedule, and which were never examined upon at all, and were not even included in the curriculum of the student. This was a defect which he thought the Council should remedy. The education of law students consisted chiefly in the study of cases, but in the education of the medical student the importance of that kind of work had been very greatly overlooked. He was glad to see that the Examination Committee supported him in that attempt, so far that they were kind enough to say, in reference to his statement of last year. "With regard to the reference in Dr. Glover's motion of May 31st, 1889, to common diseases, their early recognition, and treatment, your committee would observe that the imperfect knowledge so widely displayed in respect of exanthematous and other infectious disorders, and which your committee regards as a very grave matter, is a subject for the Education Committee of which Dr. Glover is a member. The remedy is obvious that certificates of attendance at fever hospitals should be made compulsory." He (Dr. Glover) was anxious that they should go further, and make sure in the future that candidates would be required to supply some material for judging of their experience of enormous classes of diseases. There was nothing in his schedule proposal against the notion of insisting on students being required to have dresserships and clerkships — of which he highly approved. But in many schools there was not material enough for these.

Mr. WHEELHOUSE, in seconding the proposal, said he took this to be the best means of ascertaining to what good effect or otherwise the student had utilised the fifth year which had been added to the curriculum. It was quite impossible in the ordinary examinations to deal with the subjects contained in the proposed schedule, particularly those of the nature of infectious diseases; but steps should be taken to ensure that during the fifth year which he had spent in obtaining a knowledge of these subjects he had actually got that knowledge, and that when he presented himself at the end of that year the schedule would form a means of ascertaining whether he had been instructed in them or not.

Dr. WILKS considered that the suggestion was a necessity, and remarked that there were means in London and elsewhere at the disposal of students where such knowledge could be obtained.

Mr. MITCHELL BANKS said that Dr. Glover had fairly and frankly told them, when drawing up this report, that he had this subject in contemplation, but it did not meet with the consent of many of the members of the committee. He could not see his way to accept it, as he thought Dr. Glover had not quite appreciated the difficulties that such a proposition as this would throw in the way of both teachers and taught. He considered the matter too much from a practitioner's point of view. He (Mr. Banks) was quite willing to admit that what Dr. Glover said was right, but Dr. Glover had never been a teacher himself, and consequently did not fully appreciate the difficulties that teachers and students would have in honestly dealing with the matter in the way he wished. If the Council were to compel students to produce certificates of having seen and actually dealt with all the diseases mentioned in the schedule, it would only be encouraging so much absolute dishonesty. He was certain that no good would be done by offering to the various bodies such a scheme as Dr. Glover proposed. They would never accept it, and the Council could not force it upon them.

Dr. WATSON asked what Dr. Glover meant by infectious diseases, and why small-pox, chicken-pox, and some others had been excluded from the list.

Mr. BRUDENELL CARTER thought it was hardly necessary to include in the schedule the diseases of the eye or skin, as at all the general hospitals there were skin departments and eye departments, affording abundant opportunity to the student studying these cases. He was frequently appealed to by the examining authorities to lend them suitable cases for examination.

Dr. MACALISTER asked what numbers were likely to be written opposite the words "all sorts of common diseases"? Nothing was said as to whether a student failing to fill up the schedule would be excluded from examination.

Dr. LEISHMAN expressed his strong disapproval of the suggestion, although he entirely agreed with the object it had in view. If the Council accepted it, the whole thing would come to be a ridiculous farce.

Sir DYCE DUCKWORTH, from his experience as an ex-

aminer, could not agree with Dr. Glover's assertions as to the cases which were submitted for clinical examinations. He took simply the examinations of the Conjoint Board. He held in his hand a list of the cases on which candidates had been examined in the Examination Hall on the Embankment. The cases were contrived to illustrate every possible kind of disease. As to "common diseases," he did not know what these were. He supposed they consisted of trifling ailments, but the students saw these in large numbers in the out-patient department and were well instructed upon them. In regard to such subjects as fevers, arrangements had been made and had received the consent of the Local Government Board of this country, whereby students would be afforded opportunities to see these diseases. It was preposterous to demand clinical experience from a man who had only been taught how to learn and expect him to be as skilful as one accustomed to the work.

Dr. GLOVER was sorry to see in the minds of most teachers a very dead set made against the proposal which he had thought would go a great way in stimulating both teachers and students to enlarge their clinical work. Dr. Leishman had drawn a painful picture of what was likely to happen, and how the student and the teacher would put their heads together to fill up the certificate or form in such a way as not to convey the truth. [Dr. Leishman, interrupting, repudiated this statement.] He had said that the arrangement would become a farce. There was one thing worse than a farce, and that was a fraud, and for the Medical Council to send out into the world as qualified those who had never seen a case of scarlet fever was something worse than a farce. These things were omitted in the education of the medical student, and if the very modest request to remedy this deficiency was objected to, he thought the result would be very disappointing to the profession. He hoped it would not be dismissed. Days had been spent in considering how to teach physics, chemistry, and anatomy, and this was a humble attempt on his part to make sure that students were taught that which was, above all things, important for them to know.

The motion was then put to the vote and negatived.

On Dr. GLOVER'S requisition, the names and numbers of those who voted for and against the amendment respectively, and of those who did not vote, were taken down. It was found that 13 voted against the motion, 3 for it, 8 abstained from voting, and 6 were absent.

The Council then adjourned.

MONDAY, JUNE 2ND.

The President took the chair at 2 o'clock, and the minutes of the previous meeting were read and confirmed.

Case of Impersonation.

The PRESIDENT read a letter from Mr. Farrer, solicitor to the Council, to the effect that Mr. Richard Jones Owen, who had by fraudulent means secured an entry of his name on the Register, had not appeared to his bail. The magistrate at Liverpool had ordered that the bail should be estreated, and had given directions for his rearrest. It was believed that the accused had left the country, and the solicitor did not consider it worth while to incur the expense of trying to find him.

On the motion of Mr. MACNAMARA the letter was received and entered on the minutes.

Education Committee Report.

The Council having resolved itself into committee,

Dr. STRUTHERS moved the seventh recommendation of the committee, which was after some discussion agreed to: "That the regulations of the examining bodies and of the schools should be so framed that attendance on systematic courses may be concluded at the end of the fourth year of study, so as to permit of the student devoting the fifth year entirely to clinical work, as defined in Recommendation 4.

The eighth recommendation was then proposed—namely: "That with the view of securing attention to practical work in education, the time devoted to the practical part of the examinations in all the subjects should be extended."

Dr. STRUTHERS observed that in making the three final recommendations they did not wish to be thought encroaching on the province of the Examination Committee. They were merely giving out general recommendations with a view to securing attention to practical work, and therefore they proposed that the practical examination should be extended. In France and Germany there were no written examinations at all, and he was old enough to remember the time when they did not exist in this country.

Mr. WHEELHOUSE felt strongly that if written examinations were required to test the capability of the student, it was not necessary they should be conducted at the chief centres. He believed such examinations could be as well conducted at the various medical schools by the appointment of accredited authorities.

Dr. HERON WATSON asked if a practical examination meant an oral examination.

Dr. STRUTHERS said it was a common thing in England to distinguish between these two. Oral meant an examination across the table without specimens, but a practical examination would include specimens.

The recommendation was agreed to.

The Scientific Part of the Professional Examination.

Dr. STRUTHERS next proposed the ninth recommendation of the Educational Committee: "That the examination in the elements of physics (including mechanics), chemistry, and biology, should be passed before the beginning of the second winter session." He remarked that the whole of the report was based on the assumption that these subjects would be included in the professional curriculum, and would be examined upon. What was a medical man nowadays, and still more, what would medical men in the future be, who did not understand the elements of biology? The committee did not propose to carry the examination on these subjects too far, but he presumed the effect of the recommendations would be to encourage the establishment of facilities for the practical study of these subjects.

Dr. TUKE moved an amendment that the word "biology" be omitted. He asked the Council to consider whether any good could come from overloading the curriculum. They were told that this examination was to be on elementary biology. There was some difficulty in finding out what elementary biology implied. He read from the regulations and schedules for the medical and surgical degrees of the University of Cambridge to show what was considered elementary biology for the purposes of that degree. He held that a prolonged study of these subjects might place very serious obstacles in the way of men getting to the practical part of their education. A considerable proportion of men would be "plucked," and that meant practically relegation for another year. It was a subject not entering in any way into the curriculum. Their principal work was to teach men how to learn, and it seemed that could be done just as well by the careful study of physics and animal osteology and chemistry.

Dr. HAUGHTON seconded the motion *pro formâ*, but he did not promise to vote for it. He was perfectly certain that Dr. Tuke was right, that either these should be struck out, or that a much larger and more serious attention should be given to them. He did not dislike biology any more than Dr. Tuke, but he appealed to any Greek student in the room that it was a bastard word invented to hide the fact that it covered the enormous surface of study, including botany and zoology. He supported Dr. Tuke, and proposed either to throw out biology altogether, or give it the position that it ought to occupy. It was impossible, as any English institution knew well where these subjects are taught, to teach them to the most gifted student in one year; and in supporting the motion, although he would not vote for it, as that would almost imply that he slighted the subjects, whereas it was because he knew their value, and because they were treated by the medical bodies in a most disgraceful manner, that he supported this amendment. He remembered that he was supported by high authority even in this extreme proposition. No man would accuse Professor Huxley of slighting either botany or zoology, but Huxley has again and again repeated that he was so disgusted with the way that medical men were taught these subjects that he would rather they were bowed politely out of than kept in the course. It seemed like placing upon students a kind of superficial varnish of these subjects wherewith to impose upon the public. He supported the principle lying at the bottom of Dr. Tuke's motion—that these subjects were degraded by the medical profession being required to learn only a miserable smattering of them.

Sir JOHN SIMON said that under Dr. Haughton's words there lay this truth, that when we speak of biology several subjects were meant, and it might be desirable to express that fact. The same objections that had been raised with reference to this subject applied also to the subject of

medicine and surgery. They do not profess to exhaust these subjects; what they contended for was that a medical student should know the rudiments of them, and to obtain such general notions on these subjects as competent teachers would be able to give him, in order to qualify him for approaching what was more especially professional work.

Dr. PETTIGREW thought there were very few medical men who would not approve of teaching medical students these subjects. He would almost wish to see the word "biology" struck out, and replaced by botany and zoology.

The amendment was lost, 21 members of the Council voting against it.

Dr. HAUGHTON had long felt that the position held by elementary mechanics in medical education was most anomalous. School teaching did not cover the subject. He understood that there would be no serious objection to include the subject of mechanics in the professional examination, and proposed that the word "physics" should include the elements of statics, dynamics, and hydrostatics.

Dr. STRUTHERS had thought that physics included mechanics. It seemed that in Dublin that was not so, but there could be no harm in accepting the recommendation.

Sir WM. TURNER said, as far as he understood the matter, Dr. Haughton wanted to remove this subject from the preliminary examination of a medical student, and require it to be taken up during the first year of his medical study. He would like the Council to observe that if they inserted that subject into the preliminary examination they gave full freedom to the student to obtain his information wherever he chose; but if the subject were removed from the preliminary examination and put into the professional examination, the Examining Bodies would require that this information should be got at particular institutions. [Dr. STRUTHERS: Not necessarily so.] He proposed that the Council should allow these subjects to be taken either in the preliminary examination or at the end of the first year.

Sir JOHN SIMON said that it was their present law.

Dr. WATSON hoped that Dr. Struthers would a little more distinctly indicate whether the recommendation of the Council would insist upon their attending a course of lectures on these subjects.

Dr. STRUTHERS gave a reply which Dr. Watson thought most unsatisfactory.

Yearly Examinations.

After some discussion it was agreed that Recommendation 10 should be taken in two parts. The first part was moved by Dr. ATTHILL, that "Subsequently there should be an examination at the end of each year's study, arranged so as to secure due continuity and sequence of study." He said that attendance at one hundred lectures was not sufficient. They had spent a great deal of time in discussing the question of the five years' system, but he held that it was of little importance how many years were spent in the study of medicine, provided the knowledge was carefully tested. He agreed with Sir William Turner that the bane of the present age was competitive examinations. The system of non-competitive examinations applied to medicine more than to any other subject. This annual examination was not only of great importance, but he was perfectly sure that it would ensure the attention and advance the education of the student. He proposed further to drop the subjects that had been previously examined upon.

Dr. BRUCE seconded the motion. The final examination, he said, really embraced all that was important, and the examiner had the power to check the student who had studied any subject and had taken pains to forget it.

Mr. MACNAMARA advocated regularity and consistency in the studies, and suggested that if a student had not passed his first examination he should not be allowed to go forward to his second.

Dr. KIDD thought it would be a great advantage to the student to learn his business by degrees, and not concentrate the whole four years' work into one great final examination. It would further enable students' friends to ascertain whether the pupil was working or idling.

Dr. LEISHMAN moved as an amendment: "That antecedent to the final 'qualifying' examination there be three professional examinations, arranged in such manner as to secure due continuity and sequence of study." He disapproved of making too many changes in the existing regulations, and suggested a modification of the committee's recommendations that the examination should be as simple as possible. He thought the arrangement of the examination should be left to the Examining Bodies. If the periodical examinations were to be of great value they ought to be conducted in this fashion: that a man should not be allowed to go on to the second examination until he had passed the first.

Dr. PETTIGREW having seconded the amendment, it was suggested that Dr. Atthill should withdraw his motion, which was accordingly done.

Mr. WHEELHOUSE supported Dr. Leishman's proposal, and agreed with Sir Walter Foster that it was not the part of the Council to go into such detail. He would leave the examining bodies to arrange for examination as they liked.

Dr. WATSON drew attention to the fact that the Medical Act of 1886 provided that there should be a qualifying examination in medicine, surgery, and midwifery, and not a series of examinations which should lead up to the qualifying one. The question had cropped up as to what was to be done in the interval between the first examination and the final qualifying examination. Some of the committee were obviously inclined to hold an examination at the conclusion of each session, with a view to determining the progress of the pupil during that period, and to decide whether he was to be permitted to go on with his study to a further point or not. Examination was a most unsatisfactory means of ascertaining whether the student was or was not absolutely ignorant of his subject. They should also remember that examinations were costly things. It seemed to him, therefore, that the multiplication of examinations was a great misfortune, and if they decided to increase their frequency they ought to recommend that no further payment from the students should be exacted. *Viva-voce* examinations might, however, be conducted in the class-room alternately with the systematic lectures, so as to determine if the student had been making progress.

Dr. HAUGHTON recommended the Council to be exceedingly cautious about laying down hard-and-fast rules touching the difficult question of education and examination, which had been keenly discussed amongst our educationists of the present day. To him these yearly examinations seemed like pulling up the radishes to see how they were growing.

By permission of the Council the motion was withdrawn in favour of the amendment, which thus became the substantive motion, and was agreed to.

The Nature of the Final Examination.

Dr. STRUTHERS moved: "That all examinations except one, mainly of a clinical and practical nature in medicine, surgery, and midwifery, should be passed before the final year intended solely for clinical work." It was a resolution, he said, that he believed in, and if the Council did not carry it, then Recommendation No. 3, requiring the fifth year to be devoted to clinical work, would become a dead letter. They would have the students engaged in repeating the lectures they had previously listened to.

Sir JOHN SIMON deprecated the idea of forbidding examiners from going back into the subject of previous years, as it would be contradictory to the whole spirit of their legislation. They had laid down that a medical practitioner should possess a knowledge of subjects at the last examination; and if an examiner found that the man under examination did not know any more of anatomy than was known in the Dark Ages, or found him making some gross blunder in physiology, he should not be compelled to pass him merely on his clinical knowledge. They wished the students to keep up their previous knowledge, and not to allow them to imagine that when a subject had been passed they were at liberty to throw it to the winds.

Dr. KIDD moved, and Dr. MOORE seconded, the following resolution: "That all examinations, except the examination in medicine, surgery, and midwifery, should be passed before commencement of the final year, and this qualifying examination should be mainly of a clinical and practical character."

Mr. CARTER said it appeared to him that the examiner would be guided to a considerable extent by the conditions with which he had to deal. He proposed that the Council amend the proposition by the omission of the last clause.

Dr. WATSON did not understand what relation the fourth year's examination bore to the examination at the end of the fifth year, and also to the enactment of the Medical Act of 1886, that *a* qualifying examination shall be "an examination" in medicine, surgery, and midwifery, held for the purpose of granting a diploma, or diplomas, con-

ferring the right of registration. He asked when the qualifying examination took place.

Dr. GLOVER pointed out that the Council did not want to interfere with the examiner. If he found the candidate grossly ignorant in a matter of importance it would be his duty at the end of the fifth year to put him back. That was the object of the examination. At the same time they wanted to exclude a variety of subjects, such as medical jurisprudence, toxicology, &c., so that the student might devote the whole of the fifth year to the practice of medicine, surgery, and midwifery, and the great business of the examiner would be to find out whether the student had been studying these subjects in a practical way or not.

Dr. LEISHMAN said that it was proposed to divide the qualifying final examination into two parts, one part to be taken at the end of the fourth year, and the other part, which was said to be the strictly clinical part, to be taken at the end of the fifth year. He failed to observe which of these examinations was the qualifying examination, or whether it was to be looked upon as a qualifying examination divided into two parts.

Some discussion arose as to the meaning of the words qualifying examination, whereupon Sir WILLIAM TURNER suggested that the President should obtain counsel's opinion in the matter.

Mr. MACNAMARA pointed out that there was nothing in the Act stating that all subjects were to be taken at the final examination. It was merely meant that there should be a *bonâ-fide* examination on these subjects. As to the meaning of the words qualifying examination there was no need to take counsel's opinion, because they had the Act of Parliament to guide them. By the amendment they were securing that the final or qualifying examination in surgery, medicine, and midwifery was to be taken at the end of the fifth year.

Sir DYCE DUCKWORTH was quite of Mr. Macnamara's opinion. It was for the Council to say what the qualifying examination was.

Sir JOHN SIMON moved that the committee report progress. Progress was accordingly reported, and the Council adjourned.

TUESDAY, JUNE 3RD.

The Nature of the Final Examination.

The minutes of the previous meeting having been read and adopted, the Council resolved itself into committee.

Sir JOHN SIMON resumed the adjourned discussion on Dr. Struthers' motion. If they referred to the terms of the Medical Act they would see that the last examination by this resolution would be broken up into two parts, one part theoretical and the other practical. He thought they were scarcely justified in saying that the last two years should have particular divisions of the examination. It would be an advantage to let the subject drop, and not press the subdivision of the clinical examination.

Dr. MACALISTER could quite understand that this resolution might be so interpreted as to exclude such subjects as pathology, the elements of hygiene, medical jurisprudence, and also the principles of surgery from being included in the final examination. By excluding these scientific subjects from the final examination they lowered its standard. He moved therefore: "That all examinations, except the final examination in medicine, surgery, and midwifery, should be passed before the final year intended for clinical work."

Sir WM. TURNER thought they were attempting to draw too sharp a line of demarcation between the practice and theory of medicine and surgery. He had found himself in opposition on more than one occasion with the Education Committee, in connexion with the question as to how the fifth year should be employed. The words "entirely clinical" had now been dropped from the resolution, but he observed that Dr. Struthers' proposition introduced an equivalent word—the word "solely."

Dr. STRUTHERS did not object to the word "solely" going out, as the word "devoted" embodied the whole meaning. He had tried to avoid the term "qualifying examination," as he thought it was dangerous to use a term which had never been defined.

Dr. GLOVER supported the motion of Dr. Struthers, because they had only accepted the fifth year of medical education on condition that it be devoted to clinical work.

Sir JOHN SIMON, interrupting, said it was accepted subject to such additions as the Council might see fit afterwards to enact.

Dr. GLOVER, continuing, said that in the mind of a great many supporters of this resolution it had been a principle that the strictly practical nature of the final examination was the terms upon which they agreed to a fifth year.

Dr. LEISHMAN thought it would be a great mistake to divorce clinical examination from the other portions.

Mr. CARTER, who seconded Dr. MacAlister's amendment, was anxious that there should be nothing in the conducting of this examination to encourage the idea that the so-called "practical man" was the type of creature the Council wished to develop.

Sir JOHN SIMON said he understood the resolution to mean that "all except what was final should be taken before the final."

Dr. MacAlister's amendment was carried, and, on being put as a substantive motion, was agreed to.

The Age of Candidates.

Dr. KIDD moved: "That it be a recommendation that, in view of the extension of the curriculum to five years, no degree or licence to practise medicine and surgery before the candidate has attained the age of twenty-three years shall be conferred."

After some discussion the motion was negatived.

Preliminary Examination in General Education.

The Council then considered the following resolution on the preliminary examination in general education:—

1. English language, including grammar and composition. 2. Latin, including grammar, translation from specified authors, and translation of easy passages not taken from such authors. 3. Mathematics, comprising—(*a*) arithmetic; (*b*) algebra, as far as simple equations, inclusive; (*c*) geometry, the subject matter of Euclid, Books I., II., and III., with easy deductions. 4. One of the following optional subjects: (*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*), any other modern language, (*f*) logic. That the list of examinations at present received as fulfilling the conditions of the Council as regards preliminary education be revised by the Education Committee, so as to include only those the standard of examination of which, in the specified subjects of preliminary examination, comes up to the standard considered desirable by the Council; and that it be an instruction to the committee appointed for this purpose to consider the whole conditions under which the examinations are conducted and the candidates passed in the various subjects; and that the committee report to the Council.

Dr. CAMERON moved, and Dr. TUKE seconded, an amendment, to the effect that the word "logic" be omitted.

The amendment was negatived, and the original motion was agreed to.

Dr. STRUTHERS said that the proposals had engaged the serious attention of the committee. He thought their standard of examination was deplorably low, and kept other bodies, like the Universities, from raising their standard. England was shamefully below France and Germany in this matter. He thought that the candidate should be able to write correctly from dictation, and also be required to pass a sufficient test in spelling.

Dr. MACALISTER had submitted these proposals to a former President of the Council, who considered that the Council was going too much into detail. He knew plenty of young men with an excellent general education who perhaps would not be able to pass an examination in writing from dictation. He also objected to the definition and derivation of words being included in the examination.

Dr. WATSON thought that they should put in "to write sentences 'legibly' in correct English on a given theme."

Irish Diplomates' Grievances.

Mr. MACNAMARA moved: "That the duty having been imposed on the General Medical Council by Section 3, Subsection 2 of the Medical Act, 1886, of securing the maintenance of a standard of proficiency from all candidates at the several qualifying examinations, such as sufficiently to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery, this Council cannot view with favour conditions imposed on candidates for important medical and surgical appointments in the United Kingdom, who have passed the examinations conducted under their supervision, which would imply that the said candidates, if successful in their candidature, would be incompetent to discharge the duties devolving on them with efficiency."

The PRESIDENT thought this was a question the Council could not deal with; they had no control over it. It was merely possible for them to give an expression of opinion which would not be of any consequence to anybody. He suggested, therefore, that it should be withdrawn.

Mr. MACNAMARA said that his opinion was that the

Council had a duty cast upon them with reference to this question which involved very important considerations with reference to the way in which this Council had discharged its duty. The duty of the Medical Council was to see that every person passing a qualifying examination was competent to discharge the duties devolving upon him. Resolutions had been passed by certain bodies which rendered it perfectly clear that they thought the Council had not discharged the duty imposed upon them. The question had been taken up by the medical press, and a considerable agitation existed throughout the profession, not only in Ireland but also in England. It was felt that it was an unworthy provision that regulations implying such imperfections of knowledge should be brought to bear upon a certain number of men enjoying other qualifications. In THE LANCET he read that it would be no longer tolerable to maintain privileges against those who had passed examinations of equal severity elsewhere, and THE LANCET in that very passage affirmed that it was the duty of the bodies who were suffering under such debarment to prove that they were unjustly treated. He said it was not only that, but it was the duty of the Council to cast back an implied doubt as to whether it had discharged its duties in visiting this examination and ascertaining the efficiency. The only thing which would justify the conduct complained of would be what he called a trilemma. The first leg of that was a very unworthy one, of which he would altogether acquit the authorities—and that was English monopolists wanting to keep up such appointments for Englishmen; the second leg of the trilemma was racial prejudice; and the third was the only one that would be justifiable—namely, incompetency. He asserted that persons holding Irish qualifications entitling them to practise had gained those qualifications after as severe a test as was applied in any other division of the kingdom. He maintained that it was a reflection upon the Council that they had not done their duty if these gentlemen holding these qualifications were incompetent to hold appointments in the public institutions of this country.

Dr. ATTHILL having seconded, Sir WILLIAM TURNER moved the previous question, which Dr. BRUCE seconded, stating that it was no part of the duty of the Council to lay down conditions and requirements under which the governors of medical institutions were to declare what qualifications they would expect from candidates. This motion was carried.

Certificates of Moral Character.

Mr. MACNAMARA moved: "That it be recommended to the several medical authorities to require of candidates for their several registrable qualifications certificates of good moral character, signed by the deans, or secretaries, or other proper officer, of the schools at which they may have studied."

The motion having been put to the vote, and the voting having been found to be equal, the PRESIDENT gave his casting vote against the motion, stating that it was not because he disapproved of the object of the motion, but he did not think the way it was proposed was the right way.

University of Glasgow Public Health Diplomas Committee.

The Council then proceeded to consider the report of this committee, the recommendations and conclusions of which are as follows:—

The Committee, having examined the documents referred to, and considered the examination papers of the Glasgow University Examination for Diplomas in Public Health held on October 15th and 16th, 1889, are of opinion that the said papers were not a sufficient test in respect to a written examination for the granting of a qualification in Public Health, more especially as they did not include either an examination in the duties of health officers or in a knowledge of leading Sanitary Acts or in vital statistics, as embraced in the regulations for obtaining a qualification in Public Health in the University of Glasgow as entered in the minutes of the Council on February 15th, 1887 (vol. xxiv., pp. 63, 64), and recognised by the Council on February 21st, 1887 (vol. xxiv., p. 144). Moreover, having regard to the important nature of the subjects omitted from the written examination held on October 15th and 16th, 1889, when considered in connexion with the small number of examiners, and the large number of candidates, and the time occupied in the oral examination; the committee are further of opinion that the deficiencies of the written examination could not have been satisfactorily supplied by the oral and practical examination as described.

June 2nd, 1890. WALTER FOSTER, M.D., Chairman.

Sir WALTER FOSTER moved that the report be received and entered on the minutes. They had considered that it was best to limit the inquiry to the documentary evidence before them, inasmuch as it seemed to them sufficient to enable a satisfactory conclusion to be come to, and the documents mentioned in the report would justify the conclusion which they desired the Council to take. The evidence practically was that of a memorial from Dr. Glaister, including (1) several papers of the Glasgow University and various other licensing bodies, and (2) a letter from the secretary of the Public Health Medical Society; (3) a letter from the University of Glasgow; (4) a statement sent by the University of Glasgow in regard to the examination for the Diploma in Public Health held by it in October, 1889. It was found desirable to obtain information to elucidate certain points. For that purpose they had sent a telegram to Glasgow, and received two replies from the University of Glasgow, and also a telegram from Dr. Glaister, stating the memorialists desired a hearing in reply to the statement of the Senate, which they deemed unsatisfactory. The committee, however, did not think it was necessary to go on expiscating in troubled waters, with the prospect of not being able to land any fish, and had therefore limited the inquiry strictly to the documentary evidence before them. With reference to the examination, they had compared the examination papers of that University with those of other examining bodies, to see whether there was sufficient ground for believing that it was a thoroughly satisfactory one, such as ought to be passed by gentlemen desiring to obtain qualification in Public Health. They did not find in the examination papers evidence that the regulations required by the Council had been fulfilled. They thought the written examination was deficient, or of such a nature that it could not possibly be supplemented by any oral or practical examination which had been described to them. In point of fact, some subjects could scarcely have been entered upon. It had not included either an examination in the duties of health officers, or in a knowledge of the leading Sanitary Acts, or in vital statistics, or a knowledge of calculating death-rates. Under those circumstances the committee arrived at the conclusion, first of all, that the written examination was not sufficient as a test for the diploma in Health; and secondly, that the deficiencies of the written examination could not have been completely supplemented by the subsequent practical examination. They all knew how high the University of Glasgow stood as a medical school, and were sorry to be obliged, in this report, to condemn the particular examination brought under notice.

Sir DYCE DUCKWORTH seconded.

Dr. HERON WATSON moved the following amendment:—"That the report received and entered upon the minutes of the University of Glasgow's Public Health Diplomas Committee be forwarded without any expression of opinion to the Senatus Academicus of that University, and that the same be intimated to the memorialists and to the Secretary of the Public Health Medical Society." He said it seemed to him that if the Council adopted the report they would give the parties concerned a response which was scarcely founded upon broad enough principles and facts. He was willing to assent to the report up to a certain point. It was the last portion with which he disagreed, as it seemed to indicate that the committee had allowed themselves to be too much guided by mere inferences. Had the committee desired full and accurate information their proper course would have been to apply to the examiners. In his opinion the University had a clean hand and a pure heart in the matter. It was with the two gentlemen who had conducted the examination that fault should be found if it was to be found with anyone. Glasgow University had held examinations in sanitary science since 1871, conducting them as they thought fit, and gentlemen who had passed them were entered on the Register. The examination was the last held under the old conditions. Personally, he thought the University had acted in a straightforward manner.

Sir WILLIAM TURNER seconded the amendment.

Dr. PETTIGREW contended that the conclusions of the report were based upon altogether insufficient data. He thought that if the Council had followed the proper course, they would have sent visitors to the examination, and if anything had been amiss they would have received a report from them in the usual way.

Mr. CARTER was of opinion that if the report erred it did so on the side of indulgence. The Council had now for the first time found itself face to face with a flagrant instance of insufficiency of examination. The Council had nothing to do with the examiners appointed by the University of Glasgow; they had only to deal with the University. The record of their proceedings showed that, having regard to the terms of the Local Government Act,

and the special privilege to be accorded to the holders of the diplomas, it was essential to declare, with regard to its own future action, the Council would not recognise diplomas unless granted on such conditions as would secure scientific and practical proficiency in all the branches of study which concerned the public health. The proposal to shunt the report would bring upon the Council not only disgrace but ridicule. If that proposal was negatived, it was his intention at the proper time to move that the report having been adopted should be forwarded to the Privy Council, and, until a decision was arrived at, the registrar should be instructed not to register any diplomas in Public Health which were passed by the University of Glasgow on the basis of this examination.

On the motion of Dr. HAUGHTON, the Committee adjourned.

WEDNESDAY, JUNE 4TH.

Glasgow University Public Health Diplomas.

The Council having resolved itself into a committee, resumed the adjourned debate on Dr. Heron Watson's amendment.

Dr. HAUGHTON called attention to the fact that the Council had referred the subject of the examinations for Public Health diplomas at the Glasgow University to a committee of six presumably impartial and independent gentlemen, competent to report on a very delicate and difficult question, and that committee now asked that their report be adopted. Referring to Dr. Watson's amendment, that the report be forwarded without any expression of opinion to the Senatus Academicus of that University, he pointed out that the committee were unanimous, and therefore, if they were met by a deliberate slap in the face, he thought it would be almost impossible in the future for the Council to get such another committee to act. On inquiry into the facts, we found that the two written examination papers occupied three hours on one day; that after the written examination it appeared from the telegrams that the examiners had allowed two days to pass before the oral examination, during which time they considered the written answers of the fifty-five candidates to the two papers which were before them. Then they were told that they devoted two days to the oral examination. [Dr. WATSON: Entire days.] He wished to state to the Council what influenced his own verdict in the matter. The committee had used their best endeavours to arrive at the truth, and give a calm and deliberate verdict on the case before them. No question was needed to be raised in reference to the answers to the questions, as the committee was of opinion, and rightly so, that the examination was of an inferior kind even in the subjects that it embraced, and that the complete answering of all the questions set would not prove a sufficient qualification to be considered as a diploma in State Medicine. The committee had been satisfied that the examination was much below what it ought to have been. Some most important parts of the examination were left out. This was no new examination thrown upon the University of Glasgow. He called the attention of the committee to the very serious fact that the oral examination had omitted three most important subjects contained in the programme which the University of Glasgow had asked them to accept. Even on the supposition that the entire amount of the two days had been given to supplementary written examinations the committee had come to the conclusion, he said, rightly, that it was impossible for any two men, however gifted, to examine fifty-five candidates in two days, even in the subjects which were omitted. The candidate was never brought into the laboratory, nor were proper tests submitted to him.

Sir WILLIAM TURNER said the committee in their report had confined themselves to the insufficiency of the examination. Only last year the Council passed certain rules of a very important and sweeping character, which very materially affected the resolutions which were in existence before that period. It was therefore somewhat difficult in considering the question under discussion to look at it as an examination that had been conducted under rules laid down prior to June, 1889, and to exclude what had been done since that time. He thought that the memorialists themselves in drafting their memorial had not taken that into consideration. The preamble more than once made references to the regulations laid down by the Council, and which had been made since June, 1889, but which, he held, did not apply to the examination about which the memorialists complained, for he fixed the date of their coming into force after the date at which the examination took place. All this seemed definitely to show that the examination complained of was to be regarded as having been held under resolutions framed prior to June, 1889. The question really before the Council now was how far this examination came up to the requirements of the original resolutions of 1887. He understood that that was what the committee considered in reference to their report. The Senate of the University were asked to give some information on this matter, and it distinctly stated that the regulations were followed in every respect. That definite statement of the University of Glasgow, so far as he could judge, the committee had not taken up with a view to ascertaining its correctness or otherwise. All they had done was to receive some further explanation, which was contained in two telegrams now before them in the report. Was that, he asked, sufficient evidence to satisfy the Council that the University had made a deliberately inaccurate statement regarding the matter in question? While he fully admitted the care and time given by the committee to the consideration of the matter, yet they had not by any means exhausted the evidence which they might have obtained. It was on this account that he came forward as the seconder of Dr. Watson's motion not at present to adopt the report, but to send it down to Glasgow University.

Sir JOHN SIMON regretted the course taken by Dr. Watson, and ventured to think that the right course would have been to meet the matter by a direct vote whether or not to adopt the recommendations of the committee. It was obvious that the course proposed, if adopted by the Council, would mean setting aside this question for a year. He certainly did not say that in order to save a year or a number of years injustice should be done to any institution, but the adoption of the report in substance would not do any injustice to the University. He would be the last to consider that the Council felt that they were dealing with a case of corruption, and considered they were only dealing with a question of inadvertency, that by this faulty action Glasgow had given these men a title required in England for certain statutory purposes. It should be remembered that the Local Government Act was expressly restricted for a time to England. The provisions enact that "in England titles approved by the Medical Council should be deemed titles for Local Government appointments." He did not think that the diploma granted by the University of Glasgow ought to be recognised, and he thought that for the purposes of granting these diplomas this institution should be suspended. He wished that the University of Glasgow would cancel what it had done. He would vote for the adoption of the report, and, whether it was adopted or not, he thought it his duty to propose that the Council should suspend the recognition of these diplomas.

Dr. LEISHMAN said it was quite possible that the general opinion of the Council might be that a mistake had been committed by the Glasgow University. He was glad to hear Sir John Simon use the word "inadvertence." He could assure him it was nothing more—that nothing was further from the mind and intention of the University than to go behind the resolution of this Council, or to evade or avoid fulfilling its requirements. He ventured to ask, What were the powers of the Council with regard to the matter? He presumed the Council would transmit the report to the University and allow proper time for reply, to ascertain whether the University stood by that examination, or whether it would undertake to improve it; and, having so acted, he presumed the Council would have been satisfied. He doubted whether it was a proper procedure at once, on the responsibility of the memorialists, to place that memorial on the minutes and at once to appoint a committee for its consideration. He did not object to the Council taking such steps, but in the present case the necessity had not arisen for doing so. Probably before the Council met again regulations would be submitted to it for its approval, and that means would be taken, so far as the future is concerned, to avoid a recurrence of anything of the kind. He would support the resolution of Dr. Watson, but if he had been left to his own judgment he would have voted for a direct negative.

Mr. MACNAMARA wished the report to appear on the minutes as the unanimous statement of the committee. After that had been done he would vote most cheerfully for

any resolution that might be made for the purpose of referring it back.

Dr. CAMERON very much regretted that he could not satisfy his sense of duty in any other way than by supporting the motion to adopt this report. For various reasons, and after careful deliberation, he could not see his way to support the amendment, because he could not conceive it possible that the Council could send out a report of which it had not approved in some way or other.

Sir WALTER FOSTER accepted all the statements Dr. Leishman had made as satisfactory to them in the discussion of the report. Sir William Turner had raised two points which were worthy of consideration. The first was that the committee had not consulted the two representatives from Glasgow. The committee had been most anxious to be above suspicion, and if they had taken that course it would manifestly have been unfair to the other side. Regarding the statement that the memorialists had a constitutional remedy by appealing to the University Court, he hoped the memorialists would take that course; but in the meantime fifty-five men were let loose and were applying every day for registration, and he was of opinion that if any steps were to be taken in the matter it should be done at once. He doubted very much if there had ever before been more than half the number of diplomates, possibly not even a quarter, on the Register of the University of Glasgow. If the amendment were carried, it would only lead to the introduction of a third party into the question, and would place the committee in the forefront of the battle.

The PRESIDENT mentioned that his voting for the adoption of the report would express as fully as any speech from him his opinion on the subject.

On the vote being taken, it was found that 17 voted against the amendment, and 5 for it.

Sir JOHN SIMON suggested that the Scotch members of the Council might now propose the next step that should be taken in regard to the report.

Dr. WATSON thought that the seventeen gentlemen who had acted as they had done by their votes should be left to get out of the difficulty the best way they could.

Recommendations of the Examination Committee.

Sir DYCE DUCKWORTH then submitted the recommendations of the Examination Committee for the consideration of the committee of the whole Council, and which were afterwards confirmed by the whole Council. The following are the recommendations:—

(*a*) That the system of compensation as between the different subjects of the qualifying examinations in medicine, surgery, and midwifery stands condemned as contrary to the Medical Act of 1886, and your committee begs leave to urge that the Council should formally direct the attention of the several medical authorities to this fact. (*b*) That the marks for the written and oral examinations in medicine and surgery at the final examination should not exceed those for the clinical and practical portions of the examination. (*c*) Your committee is also strongly impressed with the necessity for insisting that candidates should have held one or more of the offices of clinical, obstetrical, out-patient, and post-mortem clerk, and dresser to both out- and in-patients, and directs the attention of the Education Committee to this matter. (*d*) The practice of different authorities varies on the question whether a student who fails to satisfy the examiners in each of the several subjects of medicine, surgery, and midwifery should be referred on all of them or only on those in which he fails. (*e*) Your committee recommends that some general principle should be adopted with reference to this question; and suggests that an average percentage of not less than 65 marks—supposing that the pass marks be 50 per cent.—should exempt from re-examination on the subject or subjects on which the pass percentage is attained.

Business placed on the Minutes.

The report of the Executive Committee, a communication from the Local Authority of Glasgow, a memorial signed by forty-seven unqualified assistants of over twenty years' standing, praying the Council to institute examinations *sine curriculo* on their behalf, together with a communication from the Royal University of Ireland, were ordered to be received and entered upon the minutes.

Dental Business.

In reply to a question by Mr. MACNAMARA, as to whether titles conferred by the several medical authorities subsequently to the passing of the Medical Act (1886), but not conferred in accordance with the provisions contained therein, said titles being conferred on registered dentists only after *bonâ-fide* examination, are or are not registrable in the Dentists' Register as "additional qualifications" under the provisions of Clause 6 of Section 11 of the Dentists Act (1878),—

The PRESIDENT gave the following answer:—"Acting on the powers conferred by the cited section of the Dentists Act (1878), the General Council, on April 28th, 1881, resolved that every registered dentist holding any of the surgical qualifications set forth in Schedule A of the Medical Act (1858) should have such qualification or qualifications recorded in the Dentists' Register as evidence of the possession of a higher degree of knowledge. Moreover, this right was extended to the Council to "any or all of the qualifications named in Schedule A of the Medical Act." Seeing, therefore, that the entry of such qualifications as the Dentists' Register confers no right to practise medicine or surgery, but merely records the possession of a higher degree of knowledge, the provisions of the Medical Act (1886) do not restrain the Council from registering in the Dentists' Register the titles specified in this question.

Dr. GLOVER asked the President the following questions:—(*a*) By what authority are registrations under Section 37 of the Dentists Act (1878) permitted? (*b*) After what kind and degree of investigation is such registration ordered?

The PRESIDENT said: Every application for registration under Section 37 of the Dentists Act (1878) is carefully investigated, and the process of investigation sometimes occupies several months. Each such application is considered by the President, and additional information, if deemed necessary, is sought for from the applicant. Furthermore, whenever a doubt arises in regard to any legal points in connexion with such an application, the case is always referred by the President to the Council's legal advisers, and is sometimes also remitted specially to the Executive Committee. Thus all possible care is taken in regard to applications under the said section of the Dentists Act, though, in consequence of the framers of the Act having placed no limit of time to such form of registration, such applicants cannot legally be rejected, as, in fact, has been intimated by solicitors acting for certain applicants. For dentists who were "in practice before July 22nd, 1878," a distinct limit of time was set forth in the Act; but in regard to these applications under Section 37, no limit whatever is prescribed in that Act. Of necessity, by lapse of time these applications are diminishing in number. For five months past there have been received no more than ten of any kind; of these four have been summarily rejected, four have been acceded to, and two are still under investigation.

The Council then adjourned.

THURSDAY, JUNE 5TH.

The Council adopted, with some modifications, the minutes passed at its last meeting, and proceeded to discuss certain clauses for the consolidation of the amendments. For technical reasons this was deferred until Friday. The Council also adopted the recommendations of the Executive Committee. In regard to clinical teaching of fevers it was decided by the Council to forward a copy of their resolution on this subject to the authorities, as a special mark of the Council's appreciation of their action in this matter. The question of the further action to be taken by the Council on the recommendation of the committee appointed to examine into the sufficiency of the examinations for the Public Health diplomas of the Glasgow University was deferred. The Council, on the motion of Dr. Haughton, decided not to grant the prayer of the Royal University of Ireland for exemption from certain recommendations of the Council in reference to the Sanitary diplomas. A full report will appear in our next issue.

METROPOLITAN CONVALESCENT INSTITUTION.—A meeting of the friends and supporters of this institution to celebrate the jubilee of the charity took place on the 2nd inst. at Grosvenor House. The Duke of Westminster, the president, spoke of the admirable work which had been done by this institution. It consists of three distinct parts—the larger establishment at Walton, the branch at Kingston-hill for children, and the seaside branch at Bexhill. Great credit must be due to an institution like this, which had supplied the wants of 5000 patients during the past year, and which, during its fifty years' existence, had helped no less than 111,000 patients. Sir Andrew Clark, Mr. Stuart Wortley, the Rev. H. R. Haweis, Mr. Garrett Anderson, and others, also urged the claims of the institution upon the support of the benevolent.

Pharmacology and Therapeutics.

ANTISEPSIN OR PARAMONOBROM-ACETANILID.

DR. CATTANI finds that antisepsin in doses of five-sixths of a grain four times a day reduces the temperature of phthisis—especially when it is higher than 102°—one or two degrees, slowing the pulse at the same time, but not the respiration. It acts similarly in typhus and typhoid fever. In pneumonia it is liable to produce a good deal of cyanosis, which, if alarming, should be treated by the inhalation of oxygen. In neuralgia it acts similarly to antipyrin and antifebrin. It would appear, however, that the most important use to which antisepsin can be put is to apply it to wounds and ulcers. Under a transparent but impermeable coating of antisepsin wounds heal and cicatrise in a surprising manner. It has also proved useful in hæmorrhoids and anal lesions. For this purpose suppositories are used containing a ½ per cent. of the drug. One great advantage antisepsin possesses over many other antiseptics is an entire freedom from smell.

THE ACTIVE PRINCIPLE OF JEQUIRITY.

A Dutch observer, Dr. Nicolai, has been engaged in a series of observations directed to the elucidation of the question whether the irritant action of the seeds of the Abrus precatorius, or jequirity, is due to a non-organised ferment or to bacteria. He found that while a pure culture from the seeds produced no irritation of the conjunctiva, a chemical preparation in which there were no bacteria set up the inflammation characteristic of jequirity. He concludes that the active body is an amorphous ferment or "entyme," which can be isolated in the form of a white powder. This substance caused conjunctivitis in four or five hours. Its activity was destroyed by a temperature of 180° C. when dry, but a 3 per cent. solution became inactive after being heated to 78° C. It was also rendered inactive by borax and by prolonged treatment with absolute alcohol. Chloroform, ether, and corrosive sublimate did not affect it. No resemblance could be traced between it and pepsin rennet or diastase. It appeared to have strong toxic properties, for when injected into the venous circulation in rabbits it rapidly proved fatal, causing convulsions and paralysis of the heart.

FLUOROFORM.

From the *Monthly Journal of Pharmacy* we learn of the announcement by the French chemist, M. Meslans, that he has succeeded in preparing fluoroform. It is the analogue of chloroform and iodoform, the chlorine and iodine of these substances being replaced by fluorine in fluoroform. But whereas chloroform is a liquid and iodoform is a solid at ordinary temperatures, fluoroform is a gas. It is colourless, and has a pleasant ethereal smell recalling that of chloroform.

DISINFECTOL.

An oily blackish liquid, containing resinous soaps, and soda, compounds of phenols dissolved in hydrocarbons, which has been introduced by Lœwenstein into commerce under the name of disinfectol, has recently been examined by Dr. Beselin as to its capacity for destroying bacteria. It mixes readily with water, forming an emulsion. It was found that a 5 per cent. emulsion destroyed the bacteria in an equal volume of typhoid stools in eighteen hours, while a 20 per cent. emulsion completely disinfected double its volume of similar stools in a quarter of an hour. Experiments were then made for the purpose of determining the disinfecting power of disinfectol as compared with that of other substances. A 5 per cent. emulsion was found to be as active as a 12 per cent. emulsion of creoline, a 5 per cent. solution of carbolic acid, or a corrosive sublimate solution of the strength of 2 in a 1000. A 10 per cent emulsion of disinfectol was as active as a 50 per cent. solution of sulphuric acid. This new antiseptic has been employed in surgical practice with satisfactory results by Professor Gies and Dr. Roth. It is not caustic. Dr. Beselin has not gone into the question of possible toxic properties.

PHYSIOLOGICAL ACTION OF FERROCYANIDE OF POTASSIUM.

The physiological effects of ferrocyanide of potassium not being fully known, Drs. Combemale and Dubiquet, of Lille, have made a series of observations upon dogs and guinea-pigs. They find that this substance may be administered in doses equivalent to two thousandths of the animal's weight without producing serious toxic effects. In the dog it produces vomiting and intestinal disorders, but does not act as a diuretic; in the guinea-pig, on the other hand, which is one of the animals which do not vomit, even minute doses produce diuresis for three hours afterwards. The temperature, circulation, respiration, and nervous system are not affected. The ferrocyanide is changed in the system into ferricyanide, and is eliminated as such in the urine.

THE BRITISH PHARMACOPŒIA.

THE report for 1889 of Professor Attfield upon the various changes in the British Pharmacopœia suggested during the past year consists chiefly of descriptive and critical notices and comments which have been published during the year. It also includes a section on the influence exerted by the Pharmacopœia on the strength and quality of ordinary household medicines, a recent magisterial decision having given legal recognition to the Pharmacopœia as a standard for these remedies. This question is of considerable importance both to the public and to pharmacists. The case referred to is, of course, the famous *sal volatile* case, in which it was held that when a remedy occurred under the same name but of different composition in the British Pharmacopœia and in some formerly recognised pharmacopœia, the only variety which can be legally supplied, when the terms of the purchaser's demand are unqualified, is that authorised by the current Pharmacopœia. Professor Attfield points out that this ruling could be held to apply to a large number of domestic or household remedies, and he indicates that the introduction of popular synonyms will be a public safeguard, and will also tend to the advantage of the druggists in discouraging the purchase of drugs at "the shop of a grocer or other mere trader." The list of proposed new remedies included in this report is the same as that issued by the British Pharmaceutical Conference and published in these columns. The suggestion to mention Scheele's hydrocyanic acid is intended to fix the strength at 4 per cent., as at present it may be prepared of different strengths by different makers. The papers of Charteris and Maclennan upon salicylic acid, and the occasional impurities of the artificial salt, find recognition, and improved tests are suggested. Many topics are touched upon and dismissed as requiring a little more experience before definite statements can be made. The vexed question of the 1 per cent. solutions receives considerable notice, and the suggestion that the liquor morphinæ bimenconatis should be reduced in strength to 1 per cent. is adversely criticised. It is proposed to introduce an official formula for Seidlitz powders and to make some minor alterations in the directions given for several other preparations. Many of these changes will, of course, find place in future editions of the Pharmacopœia. Meanwhile, it is very interesting to note that the committee of the General Medical Council has, after full consideration of the lists received from the various medical authorities, selected the following list of medicines and compounds, which differs very materially from that recently published, as having been approved by the Royal College of Physicians:—Acetum ipecacuanhæ, adeps lanæ (lanolin), emplastrum menthol, eucalypti gummi, euonymus atropurpureus (a preparation of), extractum hamamelidis liquidum, extractum hydrastis liquidum, ferri subchloridum (preparations of), hamamelis virginica, homatropinæ hydrobromas, hydrastis Canadensis, liquor cocainæ hydrochloratis, liquor morphinæ sulphatis, liquor trinitrinæ, magnesii sulphas effervescens, mistura olei ricini, oleum cadinum, paraldehydum, phenylon (antipyrin), pilula ferri (Blaud), picrotoxinum, saccharinum, sodii benzoas, sodii nitris, sodii phosphas effervescens, sodii sulphas effervescens, stramonii folia, strophanthi hispidi semina, sulphonal, suppositoria glycerini, tinctura hamamelidis, tinctura hydrastis, tinctura strophanthi, trochisci sulphuris, unguentum conii, unguentum hamamelidis.

From consideration of the above, it will be seen that the following have been omitted: Hyoscine and its solution, solution of apomorphine, oleate of zinc, the mercurous and mercuric oleates, the syrup of tar, pancreatin, the soluble phosphorus pill, the green iodide of mercury, and iodide of

cadmium and its ointment. On the other hand, the list has been considerably widened by the introduction of euonymus, hydrastis, paraldehyde, picrotoxin, saccharin, and others. The list for the Addendum may now be regarded as complete, the selected list having been placed before committees of the Pharmaceutical Societies of Great Britain and Ireland for their assistance and coöperation, and it is hoped that the Addendum in its complete form will be submitted to the General Medical Council in November.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

AT the annual meeting of the Fellows, held on Saturday last, the following motion, by Mr. W. Stoker, was under consideration:—

"That it be recommended to the Fellows: (1) That at all elections subsequently to June, 1890, Vice-presidents do serve two years in that office before passing to the chair; (2) that a contest be discouraged in the case of Vice-presidents seeking re-election to that office for a second year; (3) that in alternate years a President be elected from amongst the past Presidents (one of whom the President for the time being shall be deemed to be), from whom no further service in the Vice-chair shall be required; (4) that in the year 1891, and in such subsequent years as the chair is to be filled from amongst the past Presidents, the Fellows do invite the past President (or past Presidents) whom they may consider the most worthy, or allow himself (or themselves) to be nominated for re-election as President, and that canvassing be declared undesirable; (5) that such nomination be made at a meeting of the College specially convened for that purpose, to be holden in January; the voting, if necessary, to be taken by ballot."

Mr. STOKER, having explained his views on the motion, was followed by Sir ROBERT JACKSON, who said that he regarded the motion as most complicated, and that it would open the way for canvassing in an indirect manner.

Mr. THOMSON thought the entire motion should be withdrawn, and regretted the Council had not settled the question, but had allowed the matter to pass over. The resolution of 1883 was simply to the effect that whoever was in office might be permitted to serve as President for a second year. He thought that an office of the kind ought not to be sought for; there should be no canvassing either for the Vice-presidency or the Presidency. As to No. 3, he thought the occupant of the chair should hold it for a second year; but if not willing to serve, then it might be filled by a past President who was willing to serve, and that no further service in the Vice-chair should be required. He regarded Nos. 4 and 5 as undesirable.

Mr. HAMILTON said the President was eligible for election again at the termination of his first year of office, or for a third or fourth year, in accordance with the by-laws of the College they could alter the by-laws, but otherwise any recommendations of the kind proposed were useless.

Messrs. Fitzgibbon, Tobin, and Jacob having spoken,

Mr. THOMPSON (Omagh) thought there should be no canvassing for the Vice-presidency or Presidency, and that the candidates should be nominated by the Fellows.

Mr. THOMSON moved an amendment, which was seconded by Mr. J. BELLEW KELLY (Drogheda), to the effect that Nos. 1 and 2 should stand, that Nos. 4 and 5 should be withdrawn, and that No. 3 should be modified; that when a President declined to serve a second year a past President should fill the office for a year.

Messrs. O'Grady, Ball, Thompson, and O'Callaghan proposed various amendments, which were put to the meeting and lost. Mr. Thomson's amendment was carried by 18 to 6.

Mr. CORLEY proposed that the incoming Council be recommended to obtain an alteration in the Charter, so that the office of President should last for two years, which was seconded by Sir C. CAMERON.

Ultimately Mr. Corley's suggestion was added to Mr. Thomson's amendment, put as a substantive resolution, and adopted almost unanimously.—So little interest was felt in the proceedings that the attendance of the Fellows scarcely exceeded a couple of dozen.

CITY OF LONDON CHEST HOSPITAL, VICTORIA PARK.

THE above hospital has lately been thrown open to students, and lectures were delivered during the winter months by members of the staff.

The summer course of lectures was commenced on Thursday, May 22nd, by Dr. ANDREW, consulting physician to the hospital, who chose as his subject the "Treatment of Hæmoptysis." Dr. Andrew commenced by commenting on the large number of remedies which had from time to time been used in the treatment of hæmoptysis, most of them being entirely useless, and many of them even harmful. The occurrence of hæmoptysis among out-patients was very instructive, as in such cases it generally stopped spontaneously in spite of the unfavourable surroundings. Dr. Andrew classified cases of hæmoptysis roughly into (1) those in which the hæmorrhage was slight, and (2) those in which it was profuse. The first class demanded no special treatment, and he would therefore confine his remarks to the second. The blood might be derived from passive congestion of the lungs or from thrombosis, but in the vast majority of cases hæmorrhage occurred in tubercular subjects as the result of rupture or ulceration, these being most usually preceded by the formation of an aneurysm. He also pointed out that patients rarely die from the direct loss of blood, but from suffocation or exhaustion. The lecturer drew attention to the difficulty in discovering the manner in which bleeding is arrested spontaneously in the lungs. Very few museum specimens show such conditions, and therefore it is only possible to proceed on theoretical suppositions. The bleeding might be arrested in three principal ways: (1) On the cardiac side of the lesion by diminution of the general blood pressure; (2) at the site of the lesion by contraction of the vessel (although it is doubtful if this ever occurs in the lungs), or by clotting, the clot being either preformed in the sac of the aneurysm, or outside the vessel, especially if it leak into a small vomica; (3) in parts beyond the rupture, such as by accumulation of blood in a vomica. All these methods may be assisted by drugs. The chief difficulty in choosing a remedy lies in our uncertainty of the action of drugs on the pulmonary circulation. The local application of cold has been greatly vaunted as a method of staying the flow. This, however, rather tends to increase it, by contracting the cutaneous vessels, unless it be applied over the heart, which may do good by depressing the cardiac action. Again, ice, if given by the mouth, introduces more fluid into the system, which ought to be avoided. Aconite Dr. Andrew characterised as useful and safe. Ergot is antagonistic to aconite, and is not to be recommended, as it produces a general rise of arterial pressure. Sulphuric acid, tannic acid, and acetate of lead have all had their advocates, and are useful in the early stages, but not when the hæmorrhage is very profuse. Iron ought to be avoided in persistent cases, as it acts as a cardiac tonic. The best treatment of hæmoptysis might be summarised thus: The patient should be placed in a well-ventilated room; the bed should be narrow, so that he can receive help from either side; he must be well supported in a semi-prone position, and must be carefully excluded from draughts. All blood and soiled sheets &c. should at once be removed. An ice-bag may be applied over the heart. A mild purge (calomel) should be given, a simple linctus containing opium, and a mixture containing sulphuric acid, aconite, and sufficient sulphate of magnesia to prevent constipation. Much attention must be paid to the diet. The patient should be kept on a light diet, as scanty as possible; he should be fed at regular intervals, but not too often, as frequent swallowing is to be avoided. If the pulmonary lesion can be localised, a blister over this part is often of advantage. The patient should be kept on this treatment for two or three days. In non-tubercular cases a modified form of Tufnell's treatment may be tried. Dr. Andrew concluded a very interesting lecture with a short summary.

ROYAL INSTITUTION OF GREAT BRITAIN.—C. J. Cullingworth, M.D., F.R.C.P., and Jonathan Hutchinson, Esq., F.R.S., F.R.C.S., have been elected members of the Institution.

POISONOUS MUSSELS.

THE Society of Public Medicine and of Professional Hygiene, in its excellent and practical monthly publication, the *Revue d'Hygiène*, discusses the dangers that attend the consumption of mussels and the legislative measures dealing with the subject. The fears entertained by the public are exaggerated, because simple indigestion is sometimes mistaken for specific poisoning. The French Government, in any case, was so far alarmed as to take measures that do not seem to be necessary. By the decrees of July 4th, 1853, and July 19th, 1859, the trade in mussels is forbidden in the first, second, third, and fifth maritime districts from April 30th to Sept. 1st, and from April 30th to July 1st in the fourth district. But, yielding to the advice of its Committee on Hygiene, the Ministry of Marine does allow the sale of oysters at all seasons of the year, and this without any evil consequences having ensued. The Committee of Hygiene has been now discussing whether the sale of mussels during the months of May, June, July, and August is in any way dangerous to public health. The result is that mussels generally are condemned as being more particularly indigestible and liable to occasion digestive troubles more frequently than, for instance, oysters. Indeed, the attacks of indigestion due to the consumption of mussels are sometimes so violent that more than once they have terminated fatally. It is necessary, however, to distinguish between the frequent cases of indigestion and the rare instances of poisoning. The indigestion generally occurs a very short time after the eating of mussels. There is great uneasiness and pain in the head and abdomen. This is followed by the appearance of general urticaria, which may last a few hours, or perhaps even two or three days, and is accompanied by high temperature. These symptoms are occasionally followed by faintness, syncope, delirium, and a difficulty in deglutition.

Dr. Netter, who analyses the report of the Committee appointed by the French Government to inquire into this matter, is unable to say why such violent indigestion should be brought about through eating mussels. These accidents are produced by all sorts of mussels, and have been noticed in all countries. Sometimes it suffices to eat only one or two mussels to bring about distressing symptoms. Very often if several persons dine together and eat the mussels from the same dish only one or two of the party will suffer. Evidently there is an idiosyncrasy which renders certain persons especially susceptible. Such accidents appear to be unconnected with special months of the year, and happen in winter as well as in summer. This is, therefore, no reason for interfering with the sale of mussels during the months from July to September.

M. Henneguy, the reporter of the Committee on Maritime Fisheries, does not call the attention of the Government to the above phase of the question, but he deals at length with those cases in which the toxic effects are far more serious, and sometimes result in death. For this no predisposition is necessary; everyone who has eaten the mussels becomes ill. No such case, however, has of late years occurred in France, but several instances have been recently observed in Germany and Austria. These have led to the important investigations of Virchow, Wolf, Salkowski, Brieger, Lustig, and others. The *Revue d'Hygiène* then relates the case which happened in October, 1885, when nineteen persons were poisoned in consequence of eating mussels taken from the port of Wilhemshaven. All were ill, and four died. The first symptom after the meal was a sensation of choking and marked formication in the fingers and toes; then followed as a very characteristic symptom unsteadiness of gait. In a typical case the patient seems to lose muscular sense. He will walk hurriedly about the room, or if he is lying down will throw his arms and legs about in a wild manner. These movements, though incessant, seem to occasion no sense of fatigue. Nor does the patient feel any particular alarm. There is no fever, but the pupils are dilated, do not react, and the patient hesitates in his speech. In a short time the symptoms entirely change. The movements, free at first, become painful; heaviness and weakness ensue, and then the patient may vomit; but there is no colic or diarrhœa. The extremities become cold, and, the cold spreading upwards, death ensues, sometimes in five hours, sometimes in less than an hour. Post-mortem examination shows injection of the intestinal tube, increased size of the spleen, and the liver has the same appearance as that which Virchow noticed after the employment of pilocarpine. All these symptoms justify the term of poisoning used in such cases. But this cannot be attributed to any particular kind of mussel, or to the presence of copper, or to the existence on the mussel of a small shellfish, the Pinnotheres pisum. The researches of Wolf have demonstrated that the toxic principle exists in the liver; that starfish taken in the same part of the port of Wilhemshaven were equally poisonous, but that mussels and starfish taken at the same time in other parts of the port were quite inoffensive. If, however, these fish were transferred to the side of the port where the poisonous mussels had been found, they in a very short time also became poisonous. In the year 1866 the area covered by poisonous mussels became very much smaller; in the middle of the year 1887 it disappeared altogether, but towards the end of the year poisonous mussels again abounded in this, the eastern side of the port.

Salkowski and Brieger succeeded in isolating the poison which Wolf had found in the liver, and gave it the name of "mytilotoxine." It is an alkaloid similar to ptomaines and leucomaines. The poison is due to some particular condition of the eastern side of the port of Wilhemshaven, which, according to Lustig, favours the growth of a special bacteria in the intestines of the mussels. It is regrettable that the report does not give us some account as to the nature of the various substances, the water, and the drainage that falls into the port of Wilhemshaven. Why should this port, and only one side of this port, thus render mussels poisonous? There must be, we should imagine, some special condition of the soil or the substances that flow into the port, which, if once ascertained, would indicate where and when danger might be expected. As it is, the result of the investigations are altogether of a negative character. They are useful only in so far as they show that there is no advantage in restricting the sale of mussels to certain months of the year; but while this means of protection is proved to be futile, no other, no better precautions are suggested.

BRITISH MEDICAL BENEVOLENT FUND.

DURING the present year the work of this fund has gone on in its usual quiet manner. Owing to the increased interest upon investments, and death vacancies, the committee have been able to elect twelve fresh annuitants, five in January and seven in May. In the donation department eighty-five applicants out of about 100 have been deemed eligible, and have received relief in sums varying from £3 to £20. The lamented death of Mr. G. C. Jonson, Chairman of Committee, has been felt as a serious loss by his colleagues, and at the monthly meeting on May 27th Sir James Paget, Bart., President of the Fund, who was in the chair, alluded to the loss the fund had sustained, to the many good qualities shown by Mr. Jonson, to his generosity and eminent business capacity, and concluded by saying it was thought that something should be done to perpetuate his memory, and asked the opinion of the meeting.

Dr. Bright read some letters he had received.

Dr. Broadbent proposed, and Dr. Holman, who promised the cordial coöperation of the Epsom College Council, seconded, a resolution: "That a fund be raised in connexion with the British Medical Benevolent Fund and the Royal Medical Benevolent College, in commemoration of the late Mr. G. C. Jonson, Chairman of Committee of the Fund, and Chairman of the College Council."

This was supported by Sir Andrew Clark, who instanced the loving nature of Mr. Jonson's work, and how he followed up the fortunes of those helped by his means for a long time after the immediate necessity for so doing had passed. After some remarks from Dr. Hare, who expressed a wish that Mr. Jonson's connexion with the Charles Bailey Charity should be noted, Sir Andrew Clark proposed: "That the Fund so raised should be invested for the purpose of founding a Scholarship in Epsom College, the nomination to which shall be vested in the Committee of the British Medical Benevolent Fund." This was seconded by Sir Edwin Saunders, and the Committee then proceeded with the ordinary business of the meeting and voted grants amounting to £100 to

applicants whose cases were before them. This Fund provides immediate help, and uses the subscriptions entrusted to the Committee without any salaried officer except the collector, all the work being done by members of the profession without any reward beyond the merit of the action. Subscriptions are asked for, and may be sent to Dr. Sidney Phillips, Hon. Financial Secretary, 62, Upper Berkeley-street, W.

MEDICAL TRIAL.

"'DR.' SHERMAN OF CHANCERY-LANE."

AT Bow-street Police Court on Thursday, before Sir John Bridge, J. A. Sherman of 64, Chancery-lane, was summoned for unlawfully, wilfully, and falsely taking and using the name and title of Dr. J. A. Sherman, implying that he was registered under the Medical Act of 1858, and was recognised by law as a physician or surgeon, contrary to the statute. Mr. Martin, solicitor (Messrs. Rooks & Co.), appeared on behalf of the Medical Defence Union in support of the summons, the defendant being represented by Mr. A. H. Bodkin, barrister, instructed by Messrs. H. & G. Keith, solicitors.

James F. Goodhall, assistant examiner of H.M. Customs, Liverpool, deposed that in April last he had his attention called to the defendant's advertisements as to his method of curing ruptures. Witness, who was suffering from hernia, communicated with the defendant, and subsequently came to London and saw him at 64, Chancery-lane. He paid defendant a fee of one guinea for an examination, and signed an agreement to pay a fee of twenty guineas for a course of six months' treatment. He paid £4 10s. on account, which, however, was subsequently returned to him on his threatening proceedings, having ascertained that the defendant was not a properly qualified practitioner.

Evidence was given that the words "Dr. Sherman" were painted on the street door, and also on the office door of defendant's address.

Dr. Bateman deposed that the Medical Defence Union were authorised by the General Medical Council to take up the case, and produced a certificate signed by the Registrar that defendant's name was not entered in the Register.

Mr. Bodkin submitted that there was no evidence that the defendant had "wilfully and unlawfully" taken the title of "Dr."

Sir John Bridge referred to the testimonials distributed by the defendant, in one of which the passage occurred, "I consider Dr. J. A. Sherman an excellent and honourable man, and by far the most skilful of any man of his profession." He, the learned magistrate, had nothing to do with the question as to whether the method adopted by defendant was good or bad, or with the conduct of the witness in bringing the case before the Medical Defence Union after having his money returned to him. All he had to consider was whether the defendant had acted in contravention of the Act. It was an extremely valuable thing for the public to be able to know whether a man had received that education which is so necessary for the treatment of the human body, and it was very desirable that the public should be protected from falling into the hands of a man who by his conduct holds himself out to have been properly educated, but who is not. The defendant would be fined £10.

On the application of Mr. Bodkin, Sir John Bridge granted a case as to whether the defendant had "wilfully and falsely" used the title, and a second case which Mr. Martin intimated he had been instructed to prefer was adjourned pending the result.

HOSPITAL SUNDAY SUBJECTS AND PREACHERS.

THE following is a list of the subjects of sermons to be delivered in the undermentioned places of worship on the 8th inst., on behalf of the Hospital Sunday Fund:—

St. Jude's, South Kensington.—11 A.M., Prebendary Forrest, D.D. (Vicar); subject, "The Sick at Bethesda," John v. 3.15 P.M., the Bishop of Ripon. 7 P.M., Prebendary Forrest, D.D.

St. Mildred, Bread-street, E.C.—11 A.M., Rev. C. Lloyd Engstrom (Rector); subject, "A Hospital Visited. Text, Matthew xxv., 36: "I was Sick, and ye visited Me."

St. Matthew's, West Kensington-park.—11 A.M., Rev. W. C. Tucker (Vicar); text, Jeremiah xxx., 12; subject, "An Incurable Disease." 3.30 P.M., Flower service. 7 P.M., Rev. W. C. Tucker; text, Mark i., 32; subject, "The First Hospital Sunday."

St. Giles (*Parish Church*), Camberwell.—11 A.M., the Vicar. 7 P.M., Rev. J. Beeby (Vicar of All Saints, Dulwich).

St. Barnabas, Addison-road.—11 A.M., Rev. George R. Thornton (Vicar); subject, "The Healing and Sympathy of Jesus Christ." "Looking up to Heaven, Jesus Sighed"; Mark vii., 34. 3.30 P.M.; subject, "Flowers for Sufferers" (Children's Flower Service). 7 P.M., Rev. Frank Smith, M.A.; subject, "At the Beautiful Gate of the Temple."

St. John (*Parish Church*), Stratford.—Morning, Rev. T. Stevens, M.A. (Vicar). Evening, Rev. W. J. Bettison, M.A. (Vicar of Leytonstone, E.).

Free Christian Church, Clarence-road.—Morning: subject, "The Good Samaritan." Evening: subject, "The Work of Florence Nightingale."

Congregational Church, Lancaster-road, Notting-hill, W.—Rev. John Stevens, Minister. 11 A.M.; subject, "Christ's Sympathy with Suffering Humanity." 7 P.M.; subject, "Human Sympathy with the Suffering Christ."

Christ Church, Bromley-park, Kent.—Rev. Charles Hole, LL.D., Incumbent. Morning, Rev. W. J. Perry, M.A., LL.B. (Curate of St. Luke's, Hackney); subject, "Bearing one another's Burdens." Afternoon (for the young), Rev. W. J. Perry; subject, "Doing Good." Evening, Rev. G. R. Moncreiff, M.A; subject, "Christ, the Great Healer."

Congregational Church, Wood-green.—11 A.M., Rev. W. Garrett Horder; subject, "The Prince of Life." 6.30 P.M; subject, "Wilt thou be made whole?"

St. Saviour's, Denmark-park, Champion-hill.—11 A.M., Rev. H. S. Swithinbank; subject, "The Call to Help." 3.30 P.M., Rev: H. S. Swithinbank: Flowers. 7 P.M., Rev. A. Gordon Smith.

St. Luke's Church, Bromley-common.—11 A.M., Rev. R. I. Woodhouse, M.A. (Vicar); subject, "Prevention and Cure. 7 P.M., Rev. A. Hamilton Baynes (Domestic Chaplain to the Archbishop of Canterbury).

St. Stephen's, Shepherd's-bush.—11 A.M., Rev. Alfred Long (Priest-in-Charge of St. Saviour's, Shepherd's-bush). 7 P.M, Rev. Dr. E. Ker Gray (Incumbent of St. George's Chapel, Albemarle-street).

Ilford Hospital Chapel (*St. Mary and St. Thomas the Martyr*).—Rev. A. Ingleby, M.A. (Perpetual Curate and Chaplain). Subject in the morning, "The Nation's Claims on her Established Church"; evening, "The Luxury of Giving."

St. Mary, Worcester-park.—Rev. W. A. Hales, M.A.; subject, "He shall carry nothing away with him when he dieth"; Psalm xlix., 17.

Speke Hall, Battersea.—Evening, Reader Harris, Barrister-at-Law; subject, "The Great Physician."

Colet Chapel, Margravine-gardens.—11 A.M. Rev. W. Walsh (Prebendary of St. Paul's).

Old Gravel Pit Chapel, Hackney.—Rev. J. De Kewer Williams. Morning: text, Psalm cxxxix., 14. Evening: text, Isaiah xxxiii., 24.

The Synagogue, Bayswater.—On Saturday, the 7th inst., the Rev Dr. Adler will preach on behalf of the Metropolitan Hospital Sunday Fund; subject, "London's Ills and their Remedies"; text, Isaiah xxxiii., part of 18th verse: "And her merchandise and her hire shall be holiness to the Lord."

St. Paul's Church, Paddington.—Morning, Rev. H. V. H. Cowell (Vicar); subject, "Christ's Command to Heal the Sick." Evening, Rev. E. H. Oakley (Curate); subject, "The Blessedness of providing for the Sick and Needy."

St. Peter's, Dulwich-common.—Preacher, Rev. T. T. Lucius Morgan. Subjects: 11 A.M., "The Rights and Responsibilities of Riches"; 7 P.M., "God's Farewell Sermon to Man."

Upper Norwood Congregational Church, St. Aubyn's-road, Upper Norwood, near Crystal Palace.—The Rev. George Martin (Pastor) will preach morning and evening. The evening subject will be, "Luke, the Beloved Physician."

OPEN SPACES.—Mrs. Salt of Milner Field on Saturday, in the presence of a large assembly, formally opened a new park at Shipley, for the perpetual use of the inhabitants. It has been provided by the local board, is eligibly situated for the purposes of recreation, about four acres in extent, and will in future be known as Crowgill Park.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Diphtheria and Croup in the Subdistrict of Pontypridd, by Mr. SPEAR.[1] The areas comprised within this registration subdistrict consist of three urban districts and of three of the divisions of the Pontypridd rural district; the whole of the latter being divided for medical officer of health purposes into five divisions, the remuneration assigned to the several officers being merely nominal, ranging as it does from £5 to £15 a year. Taking the subdistrict as a whole, it would appear that throat mischief has for a considerable time been prevalent there. Thus the mortality from 1885 to June, 1889, has been as follows:—Ystradyfodwg urban, 1 diphtheria, 9 croup, and 4 laryngitis, &c.; Mountain Ash urban, 14 croup and 3 laryngitis, &c.; Pontypridd urban, 2 diphtheria, 11 croup, and 6 laryngitis, &c.; and in the three divisions of the rural area referred to, 15 diphtheria, 11 croup, and 1 laryngitis. Recent diphtheria in the rural area was confined to Cilfynydd, where it began in January, 1888; and though intervals of quiescence followed, the village was never really free up to June, 1889, to which date the inquiry extended. During this period 21 families were known to have been invaded, there having been 44 attacks and 13 deaths, the greatest incidence of the disease occurring in November and December, 1888, when there were 23 attacks and 7 deaths. With one exception, the first sufferer in any family was a child, and but little precaution was taken to prevent the disease from spreading amongst relatives, schoolfellows, or friends. Besides which there was abundant sanitary neglect, the back lanes being described as having the appearance of quagmires and the yard space about the dwellings being often sewage-sodden. Building by-laws are in operation, but they are habitually infringed in such important respects as drainage and privy construction. The attitude of the medical officer of health, in the face of this long prevalence of fatal disease, is very seriously referred to in the report; indeed, he is said to have admitted that, until he wrote his annual report in 1889, he had not perused the previous mortality statistics, and hence he had not known of the fatality going on in his district. And even then no action followed. We have no wish to gloss the matter over; but, on the other hand, it is impossible not to regard, as in great measure responsible for that which happened, a sanitary authority who assign to the definite and important duties of the health officers the paltry sums which are given in this rural district, and also a central authority which, after all the experience available as to the working of the Public Health Act, allows such a sham to be maintained. Passing from this point, we would note the experience of Mr. Thomas in the Caerphilly division. In that part of the rural area recognised diphtheria had not been very abundant, but on the other hand there had been a large amount of follicular tonsillitis, which, though not associated with a fibrinous or leathery exudation, was found in connexion with tonsils which were inflamed, having points of exudation, or being covered with a catarrhal secretion; the general symptoms including headache, dorsal pain, rigors, and at times albuminuria. In these cases no paralytic sequelæ had been noted; but, having regard to what we now know of diphtheria, it is difficult to separate these Caerphilly occurrences from the genuine diphtheria in and around the same place. In so far as sanitary circumstances are concerned, it has been noted that the throats described commonly occurred together with foul effluvia from drains and otherwise. Space forbids our pointing out any details connected with the other localities affected. But when we come to eleven sets of subjects to which the attention of the urban sanitary authority of Pontypridd is directed in the report, we can only marvel that any such body has been in existence. From beginning to end everything seems to want, first, undoing and then reconstructing or rearranging anew. The sewers and drains are bad, sewage-sodden and excremental nuisances seem to abound, houses are damp and unwholesome, water-supplies are of questionable purity, and so also in such matters as slaughter-houses, dairies, isolation of disease, sanitary inspection and enforcement of by-laws, almost as much wants doing as if public health laws or administration were things which did not exist. It is significantly stated that the circumstances of Pontypridd, as described in the local health officer's report, are now "under consideration" by the Local Government Board.

[1] Eyre & Spottiswoode, East Harding-street, E.C.; Adam & Charles Black, Edinburgh; Hodges, Figgis, & Co., Dublin. Price 1½*d*.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Stafford Rural District.—Dr. Reid calculates the birth-rate and death-rate of this rural district during last year at 18·82 and 11·98 per 1000 respectively. These low rates suggest, however, an over-estimate of the population of the district, which is calculated at 14,769; it should be pointed out, moreover, that the mean annual death-rate in the ten years 1880–89 is stated to have been but 11·5 per 1000. The report refers to the prevalence, at different periods of the year, of measles and of whooping-cough, and also to local outbreaks of scarlet fever and diphtheria; but the death-rate from the aggregate of these principal zymotic diseases was considerably below the general average. The outbreak of diphtheria at Weston appears to have been clearly traced to a contaminated water-supply, but the medical officer has to report that at present no effective steps have been taken to provide an improved supply. The medical officer also calls attention to the very imperfect manner in which work ordered by the sanitary authority to be done is carried out, arising not so much from unwillingness to comply with the orders as from "ignorance on the part of the persons employed to do the work." In order to remedy this evil, he calls attention to the suggestion of Dr. Parsons, one of the inspectors of the Local Government Board, who in a report on an outbreak of diphtheria in the Leek Rural Sanitary District recommended that, in the interests of owners themselves, as well as of public health, they should, when called upon to execute structural works for the abatement of nuisances, be told precisely what the required works are, and the best way of carrying them out. The medical officer appears to have devoted considerable attention to the warming and ventilation of the elementary schools, which has already yielded satisfactory results and promise of further improvement. The importance of this subject is not always sufficiently recognised.

Bacup Urban District.—The medical officer of this district has evidently experienced considerable difficulty in estimating its population, which he calculates at 25,600 in the middle of 1889, and slightly in excess of the enumerated number in 1881. It appears, however, that in 1889 the registered births were fewer by 131 than the number in 1881. The birth-rate and death-rate calculated on this estimate was 26·07 and 17·04 per 1000 respectively. It is naturally open to doubt whether these rates are understated by an over-estimate of population. The zymotic death-rate calculated on the same estimate is given as 1·72 per 1000, the most fatal diseases being scarlet fever and whooping-cough. The medical officer urges upon his authority the adoption of the Compulsory Notification of Diseases Act, and, among other reasons for this recommendation, notes the facilities that would thus be afforded for cautioning school authorities in cases where children are known to be attending elementary schools from an infected house. The report does not, however, note the amount of hospital accommodation available for the isolation of cases of infectious diseases in the borough, or the extent to which such provision is utilised. Notification without isolation cannot be said to be entirely useless, but is obviously deprived of its main value. The report before us shows that in recent years the mortality from scarlet fever in Bacup has not shown a rate of decline equal to that which has occurred in those towns where notification in combination with isolation has been in force. Infant mortality, speaking generally, showed, as usual, a considerable excess in Bacup. Dr. Brown calls special attention to the subject of lead poisoning from contamination of the water-supply due to the use of lead service pipes, and notes that the local Company have substituted iron for lead for this purpose, but that considerable difficulty stands in the way of inducing householders to follow their example. It appears that the medical officer of this district has induced his authority to insist that with regard to all plans for new houses the way

in which the service pipes are to be laid, and the nature and quality of the material to be used, shall be precisely described.

Coventry Urban District.—The annual rate of mortality for Coventry during 1889 is not quite so satisfactory as during the preceding two years; it reached 17·3 per 1000, and the zymotic rate, which was 2·1, was also somewhat in excess. Measles was largely responsible for this, 50 deaths having resulted from this cause. An excess of infantile deaths also takes place from time to time in Coventry, and out of a total of 38 diarrhœal fatalities, 36 occurred in children under five years of age. In connexion with measles, Dr. Fenton gives an account of the last two epidemics experienced in his district, and he shows how they were both checked as the result of school closure under the order of the sanitary authority. Diphtheria is credited with one single death; but, on the other hand, there were no less than 12 fatal cases of "croup," which was not of the spasmodic form. The city infectious hospital was of great service during the year; 210 patients were received into it; and it is very satisfactory to learn that amongst 27 attacks of enteric fever there was no second case in any house from which the sick person was removed, and this though some of the dwellings in question were of a wretched character. Though good work has for years past steadily progressed in Coventry, it must be remembered that the place is an ancient city, and that the present sanitary authority and officials have inherited much from the past, which makes activity the more essential at present. Thus, we still read of private wells sunk in a soil on which generations must have lived, and the cleansing of such wells is rightly referred to as impossible. It would, indeed, be necessary to cleanse the whole soil of the town to a depth equal at least to that of the wells; and to suggest well-cleansing under such circumstances becomes a mere absurdity. The sanitary inspection of the city is well organised, attention is being given to unwholesome dwellings, the intra-urban private slaughter-houses are being reduced in number, and a set of excellent recommendations as to the future all go to show that the sanitary needs of the town are being well pressed to the fore.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 4619 births and 3310 deaths were registered during the week ending May 31st. The annual rate of mortality in these towns, which had been 19·9 and 18·6 per 1000 in the preceding two weeks, further declined last week to 17·8, a lower rate than in any week since October last. The rate was 16·6 in London and 18·8 in the twenty-seven provincial towns. During the first nine weeks of the current quarter the death-rate in the twenty-eight towns averaged 19·7 per 1000, and was 1·0 below the rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 11·7 in Nottingham, 13·4 in Cardiff, 14·5 in Leicester, and 15·2 in Plymouth. The rates in the other towns ranged upwards to 23·5 in Halifax, 23·8 in Preston, 25·9 in Newcastle-upon-Tyne, and 28·7 in Manchester. The deaths referred to the principal zymotic diseases, which had been 467 and 432 in the preceding two weeks, further declined last week to 396; they included 122 from measles, 118 from whooping-cough, 56 from scarlet fever, 46 from diphtheria, 35 from diarrhœa, 18 from "fever" (principally enteric), and 1 from small-pox. The lowest death-rates from these diseases were recorded in Halifax and Wolverhampton, and the highest rates in Liverpool, Salford, and Derby. The greatest mortality from measles occurred in London, Liverpool, Birmingham, and Derby; from whooping-cough in Norwich, Sheffield, and Derby; and from scarlet fever in Manchester. The mortality from "fever" showed no excess in any of the large towns. The 46 deaths from diphtheria in the twenty-eight towns included 25 in London, 5 in Manchester, 4 in Salford, 4 in Liverpool, 2 in Brighton, 2 in Birkenhead, and 2 in Hull. Five cases of small-pox were under treatment in the Metropolitan Asylum Hospitals at the end of the week, and not one in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 1089 at the end of last week, against 1101 and 1067 on the preceding two Saturdays; the new cases admitted during the week were 106, and corresponded with the number in the previous week. The deaths referred to diseases of the respiratory organs in London, which had steadily declined in the preceding seven weeks from 384 to 294, further fell last week to 259, but exceeded the corrected average by 7. The causes of 73, or 2·2 per cent., of the deaths in the twenty-eight towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Plymouth, Wolverhampton, Birkenhead, Oldham, and Sunderland. The largest proportions of uncertified deaths were recorded in Sheffield, Halifax, Liverpool, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·6 and 22·4 per 1000 in the preceding two weeks, further rose to 23·3 in the week ending May 31st, and exceeded by 5·5 that which prevailed during the same week in the twenty-eight English towns. The rates in the eight Scotch towns ranged from 13·1 in Greenock and in Paisley, and 17·9 in Leith, to 27·8 in Aberdeen and 28·4 in Glasgow. The 603 deaths in the eight towns exceeded by 25 the number in the previous week, and included 48 which were referred to measles, 34 to whooping-cough, 15 to diarrhœa, 7 to diphtheria, 5 to scarlet fever, 5 to "fever," and not one to small-pox. In all, 114 deaths resulted from these principal zymotic diseases, against 76 and 118 in the preceding two weeks. These deaths were equal to an annual rate of 4·4 per 1000, and exceeded by 2·3 the mean rate last week from the same diseases in the twenty-eight English towns. The highest death-rates from these diseases were 5·5 in Glasgow and 7·5 in Dundee. The fatal cases of measles, which had been 32 and 50 in the preceding two weeks, were 48 last week, of which 29 occurred in Glasgow and 17 in Dundee. The deaths referred to whooping-cough showed a decline of 8 from the number in the previous week, and included 13 in Glasgow, 9 in Edinburgh, and 7 in Aberdeen. The fatal cases of diphtheria, which had increased from 3 to 8 in the preceding three weeks, were 7 last week, of which 4 occurred in Glasgow. The 5 deaths from scarlet fever exceeded by 2 the number in the previous week, and included 2 in Leith. Of the 5 fatal cases of "fever," 3 occurred in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in the eight towns, which had been 108 and 120 in the preceding two weeks, declined to 102 last week, but exceeded by 13 the number in the corresponding period of last year. The causes of 55, or 9 per cent., of the deaths in the eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·5 and 23·9 per 1000 in the preceding two weeks, declined again to 22·5 during the week ending May 31st. During the first nine weeks of the current quarter the death-rate in the city averaged 24·2 per 1000, the rate for the same period being 17·7 in London and 20·4 in Edinburgh. The 152 deaths in Dublin last week exceeded by 10 the number in the previous week; they included 5 which were referred to whooping-cough, 3 to diarrhœa, 2 to measles, 1 to diphtheria, and not one either to small-pox, scarlet fever, or "fever." Thus the deaths from the principal zymotic diseases, which had been 12 and 8 in the preceding two weeks, rose again last week to 11; they were equal to an annual rate of 1·6 per 1000, the rate from the same diseases being 2·5 both in London and in Edinburgh. The fatal cases of whooping-cough, which had been 2 and 4 in the previous two weeks, further rose to 5 last week. No death was referred to "fever" in Dublin; this was the first week in which no fatal case of "fever" was recorded in the city since the middle of 1887. The deaths both of infants and of elderly persons showed a marked decline from those returned in the preceding week. Four inquest cases and 3 deaths from violence were registered during the week; and 64, or more than a third, of the deaths occurred in public institutions. The causes of 9, or nearly 6 per cent., of the deaths in the city were not certified.

THE SPANISH CENSUS IN 1887.

The final results of the Spanish census in 1887 have not yet been fully published, but it appears that the total

population enumerated was 17,550,216 persons, showing an increase of 951,901 upon the number enumerated ten years previously in 1877, equal to an annual rate of increase of only 5·4 per 1000 per annum, a rate of increase considerably less than half the normal annual rate of increase of population in this country. It appears that the highest rates of increase of population in Spain during the last intercensal period occurred in the provinces of Huelva and Biscaya, and the lowest rates in Soria, Teruel, and Almeira, where the population is mainly rural, is poor, and is but scantily supplied with means of communication by road and rail.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major William Edwd. Riordan (ranking as Lieutenant-Colonel) to be Brigade Surgeon, vice R. W. Berkeley, retired (dated May 6th, 1890).

ADMIRALTY.—The following appointments have been made:—Surgeons: Phillip N. Randall to Chatham Hospital (dated May 30th, 1890); George G. Borrett to the *Duke of Wellington*, additional (dated May 30th, 1890); Henry T. Kelsall to the *Invincible*, additional (dated May 30th, 1890); Walter H. S. Stalkartt to the *Vivid*, additional (dated May 30th, 1890); George A. S. Bell to the *Wildfire*, additional (dated May 30th, 1890); John A. Keogh to the *Excellent*, additional (dated June 4th, 1890); Richard Barnard and Edward Cuffe to Plymouth Hospital (dated May 30th, 1890); William W. Jacobs to the *Wildfire* (dated June 4th, 1890); and A. Patterson to the *Melpomene* (dated June 17th, 1890).

INFANTRY VOLUNTEER BRIGADES.—The Severn Brigade: Brigade Surgeon J. L. W. Ward resigns his appointment (dated June 4th, 1890); Brigade Surgeon James Forbes Beattie, M.D., retires upon retired pay (dated May 31st, 1890).

VOLUNTEER CORPS.—*Artillery:* 1st Worcestershire: David Rice, Gent., to be Acting Surgeon (dated May 31st, 1890).—*Rifle:* 5th (Irish) Volunteer Battalion, the King's (Liverpool Regiment): Joseph George McCann, Gent., to be Acting Surgeon (dated May 31st, 1890).—1st Volunteer Battalion, the Royal Scots Fusiliers: The undermentioned Surgeons to be Surgeon-Major, ranking as Majors: R. Munro, M.D., and W. Wilson (both dated May 31st, 1890); Surgeon A. Blair to be Surgeon-Major, ranking as Lieutenant-Colonel (dated May 31st, 1890).—2nd Volunteer Battalion, the South Wales Borderers: Geo. Arthur Brown, Gent., to be Acting Surgeon (dated May 31st, 1890).—1st Volunteer Battalion, the Duke of Wellington's (West Riding Regiment): Edward Ellis, Gent., to be Acting Surgeon (dated May 31st, 1890.

VOLUNTEER MEDICAL STAFF CORPS.—The London Division: Surgeon H. J. Johnson, resigns his commission (dated May 31st, 1890).—The Edinburgh Division: David Wallace, M.B., to be Acting Surgeon, supernumerary (dated May 31st 1890).

Correspondence.

"Audi alteram partem."

HOSPITAL SUNDAY.

To the Editors of THE LANCET.

SIRS,—May I ask the kind assistance which you usually accord the Lord Mayor for the time being, on the annual approach of Hospital Sunday in London, to allow me the publicity of your columns to make an urgent and especial call upon the public to exercise their continued and, if possible, their increased liberality in their response to the appeals which the clergy of all denominations will make to them next Sunday in behalf of the hospitals, dispensaries, and convalescent institutions which provide so largely for the wants of the sick poor of this great metropolis?

There are now ninety-three hospitals asking help from the Hospital Sunday Fund, besides twenty homes or institutions for the care of convalescent patients sent from London, making 113 in all. There are also no fewer than fifty-six dispensaries applying for awards. To cover the remaining outlay made by these institutions during the past year £100,000 is wanted.

If any of your readers should by any cause be prevented from making their contributions at their place of worship I shall be happy to receive their donations at the Mansion House, unless they would prefer to forward them to the minister of their congregation to be added to the offertory.

Hospital Sunday is the one day in the year when people have the privilege and opportunity, irrespective of creed or denomination, of providing in some measure, and according to their means, for the treatment of the sick poor of the metropolis, and I am particularly anxious, on the eve of these simultaneous annual collections, to impress upon all who live either in our great city, or its suburbs, or who derive their incomes from sources of any kind in our midst, the duty of making every effort to increase the amount of the collections above those in past years. The debt of gratitude we owe to these charitable institutions is above all monetary estimate. It will, however, be partially discharged if we all do our best on the coming Sabbath to aid these meritorious charities to the best of our power to continue their bountiful, beneficent, and blessed work.

I am, Sirs, your obedient servant,

HENRY A. ISAACS, Lord Mayor,
President and Treasurer to the Hospital Sunday Fund.

The Mansion House, June 5th, 1890.

"SCURVY AND THE HÆMORRHAGIC DIATHESIS."

To the Editors of THE LANCET.

SIRS,—I have read with much interest, though I confess with some surprise as a first impression of it, your account of Koch's new views as to the essential identity of scurvy with the other forms of "Bluterkrankheit." It would be imprudent, perhaps, to attempt discussion of these without having mastered them in detail in the original form and with the original evidence; but I desire at once to say briefly (and it is all I have time for at present) that it is very hard for anyone who has carefully and clinically watched the characteristics of scurvy both in sporadic cases and otherwise since the great outbreak of it in 1846–47, to come to any other conclusion than that of Professor Hirsch—i.e., one altogether opposed to the identity doctrine of Koch. When I saw my first case of scurvy—I think in 1846, as the direct result of the failure of the potato—I became absolutely convinced that my own father and most of the senior practitioners with whom I was then associated (all of them, indeed, who had never been at sea) were absolutely without personal experience of what was then to most of us a disease only known from books and for the most part as "sea scurvy." One of the oldest physicians in Scotland—a retired hospital physician, who had written largely upon epidemic disease—came under my observation shortly afterwards suffering from scurvy in his own person, and having so little notion what it was that he was leeching and starving himself in order to cure it! He had, in point of fact, never seen a case in all his long previous experience; while I, a young man, not long escaped from schools and examinations, had already (as it happened) seen hundreds. Of course, all these men knew purpura hæmorrhagica perfectly well, as I, too, came to know it in individual or sporadic examples; but no one ever saw purpura hæmorrhagica appearing after the manner we then saw scurvy, and (what is most important) no one ever thought of declaring, as we unhesitatingly did in the case of scurvy, that we should be able to cure it completely in a few weeks with lemon-juice and suitable diet. I have watched every case that has occurred to me since then, and nothing has occurred to invalidate the conclusion that scurvy and purpura are, clinically and practically, *toto cælo* distinct, however much resembling each other in the one point of being hæmorrhagic diseases; nay, that they are not even alike in most of their obvious clinical characters, and that, as a rule, a good observer cannot mistake the one for the other. Koch's contention, if not well founded, is in this respect altogether reactionary; for it was the doctrine of the middle ages that the scorbutus was a plague and an infection, and most of the doctrines in detail which you ascribe to Koch in the end of the nineteenth century may be found in Eugalenus, and are thoroughly and convincingly dealt with, once for all, in the admirable treatise of Dr. Lind.

I am, Sirs, yours truly,

Glasgow, June 3rd, 1890. W. T. GAIRDNER.

*** We do not wonder at Dr. Gairdner's surprise, but must refer him to Dr. W. Koch's monograph for the argu-

ment, in which it is sought to prove that the dietetic factors in the production of scurvy are subsidiary to, although greatly favouring, a more general cause.—ED. L.

LONDON AND EDINBURGH DEGREES.

To the Editors of THE LANCET.

SIRS,—Your last week's issue contains a letter from Mr. Taylor of Derby on the subject of London degrees, in the course of which it is asserted that the qualifications of M.R.C.S., L.R.C.P. Lond. stand on a par as guarantees of scientific training with the M.B. of certain Universities, among which is included that of Edinburgh. As statements of this sort respecting the Edinburgh degree emanate as a rule from practitioners who are not in possession of University distinctions, it has hitherto appeared to me as hardly worth one's while to reassert facts well known to everyone concerned in the preparation of students for University examinations in medicine. Yet, since loose statements, if uncontradicted, may in time come to pass current as facts, it may perhaps be as well occasionally to state a truism for the hundred and first time, and to inform those still ignorant of the real state of matters that the M.B. Edin., far from being a minimum qualification, is one of the most difficult maximum ones. The written examinations differ indeed from those of London in that they require more knowledge and less cram; but as a make-weight to this slight advantage the practical tests are far more stringent. During my career as a medical tutor and lecturer, I was formerly extensively engaged in the preparation of students for both these examinations, and have therefore had exceptional opportunities for acquainting myself with their respective scope and character. If the average London medical student of to-day is dreaming of degrees of the model of the Edinburgh one, he must be prepared to pay at a far higher rate in labour and culture than that which now satisfies the modest requirements of ordinary examining boards. Perhaps, instead of seeking to change the character of the existing London University, he might find it profitable to apply at Cambridge. The requirements of this University as regards residence, work, and examinations are now very similar to those of Edinburgh. He must not, however, entertain the idea that he will find either of these venerable *almæ matres* measurably less exacting than the dreaded Sphinx of Burlington-gardens.

I am, Sirs, yours faithfully,

BRYAN CHARLES WALLER, M.D. Edin.

Kirkby Lonsdale, June 2nd, 1890.

MEDICAL LEGISLATION IN BRITISH COLUMBIA.

To the Editors of THE LANCET.

SIRS,—I do not know whether there has appeared in THE LANCET any notification of the alteration in the Medical Act of British Columbia. An Act passed last week repeals Section 30 of the Medical Act of 1886, which section gave all registered British practitioners the right to have their names placed on the register of British Columbia without having to pass an examination here. Now, everyone wishing to practise here will be compelled to pass an examination in preliminary as well as final subjects before he can do so. On Saturday last, in a conversation with Dr. McGuigan of Vancouver, who was last year the President of the British Columbian Medical Council, I asked him if the general practitioners of British Columbia think themselves better qualified to judge of the fitness of a man to practise than the British examining bodies; and he very candidly replied that they do not, but that they are going to use the examination to prevent the profession being overcrowded. In other words, they intend to turn into a flood-gate, to dam back opposition, an examination which the Legislature ordered to prevent ignorant men imposing on the public. I came out here intending to settle in British Columbia; but after this plain notification from an examiner that no one will be allowed to pass if there is not more practice than the present practitioners think they can attend to, I consider that I shall only be throwing my money away if I pay the examination fee. As I was passing through Victoria to-day I thought I would call on Dr. Milne, the registrar of the province, and ask him what are his reasons for the change in the Act. So I put to him the same question that I put to the President, "Do the Medical Council of British Columbia think themselves better qualified to judge of the fitness of a man to practice than the examining boards of Great Britain?" He answered that they do think they are more capable, for they have had a number of very crude men out from England. This gentleman is M.D., C.M., Victoria University, Canada, and he has, I believe, practised from the time that he qualified in Victoria, British Columbia, which in 1882, the year Dr. Milne graduated, had a population of 7000, and is now supposed to contain 15,000. The Medical Council, the members of which are the examiners for the present year, was elected on the 28th inst. It is composed of the registrar, the late president, and five other gentlemen. None of them hold a British qualification. Six are Canadian graduates, and the seventh graduated at the University of California in 1865. They are all general practitioners. Five of them practise in Victoria or Vancouver, which have each a population of about 15,000; one practises in New Westminster, with a population of 5000, the last practises in Kamloops, which contains less than 2000 inhabitants.—I am, Sirs, your obedient servant,

JOHN R. WILLIAMS, L.R.C.P., M.R.C.S.

Victoria, B.C., April 30th, 1890.

To the Editors of THE LANCET.

SIRS,—During last year one or two letters appeared in THE LANCET pointing out the circumstance that British graduates did not need to pass any examination before practising in this province. Several men from England have arrived in British Columbia this year, and it will be, no doubt, a matter of surprise to them and others who may be on their way here to find that they have to undergo an examination and pay a fee of $100 (£20). The fact of the matter is simply this. Until this spring British diplomates could register here for $10 without examination. By a wondrous piece of legislation homœopaths were allowed the same privilege last year; yet Canadian and all foreign graduates were compelled to undergo examination and pay a $100 fee. In January of this year I issued a pamphlet pointing out the injustice of the existing medical laws ("Notes on Medical Legislation in British Columbia," of which I sent you a copy), and I am pleased to say the Legislative Assembly, then in session, passed a measure by which *all* medical practitioners must conform to the regulations of the Medical Council—i.e., pass an examination in all the main branches, and pay a fee of $100. British graduates who intend coming to British Columbia should bear this in mind. The Secretary of the British Columbia Medical Council should, in my opinion, have informed you of this change, and the gentlemen who wrote to you anent the matter last year might have taken the trouble to enlighten you as to the present state of the law. I am not surprised at the action of the Secretary of the Council; his apathy in this instance is only in keeping with that displayed by the Council throughout.

By inserting this in your widely circulated journal, you may be the means of averting disappointment.

I am, Sirs, yours truly,

MARK S. WADE.

Victoria, British Columbia, May 13th, 1890.

"ALBUMINURIA AS THE RESULT OF THE MORPHIA HABIT."

To the Editors of THE LANCET.

SIRS,—I have been very much interested in your annotation on the above subject, and should be glad if you could give me room for a few remarks. First of all, I am glad to see that Dr. Huchard's results as regards arterial tension exactly correspond with my own—as I pointed out in a paper read at the meeting of the British Medical Association at Leeds last year—that morphine reduced arterial tension; and I went further, and endeavoured to explain the way in which it produced this effect, and subsequent experience tends, I think, to show that what I then said was true, and that, in addition to morphine, a considerable number of other drugs influence arterial tension in the same way and by the same means—viz., by their effect on the uric acid

contained in the blood. It is no surprise to me to learn that morphine causes albuminuria—on the contrary, it is just what I should expect;—but I am quite unable to agree with the suggestion of Dr. Huchard that the albuminuria is due to the diminution of arterial tension; for, in the first place, as you remark, this cannot apply to granular kidney, in which the tension is very high, and I would add (as the late Dr. Mahomed pointed out) may be so before there is any albuminuria; and, secondly, the low tension of the morphine habit is by no means continuous, but alternates between doses with extreme high tension (a fact previously pointed out by others), and it is to this high tension that I should attribute the albuminuria; for in another paper read at the meeting at Leeds, I attempted to show that high tension may be the actual cause of albuminuria. There are several other facts which might, I think, be adduced against Dr. Huchard's suggestion that the albuminuria is due to the low tension, or that low tension *per se* will cause passive congestion of organs, but to go into these at sufficient length would lead me beyond the limits of a letter. While, therefore, I look upon the facts mentioned as of extreme interest and as tending to confirm in some important respects the results of my researches, I believe that it may be possible to give a better explanation of the causation of albuminuria by morphine than that suggested by Dr. Huchard.

I am, Sirs, yours truly,

Welbeck-street, W., May 26th, 1890. A. HAIG.

A POINT IN CONNEXION WITH GUNSHOT WOUNDS OF THE HEAD.

To the Editors of THE LANCET.

SIRS,—The other day when reading through the operations of surgery written by Mr. W. H. A. Jacobson in the article on "Operative Interference in the Case of Foreign Bodies in the Brain," the following footnote on p. 206 attracted my attention:—"Mr. Barwell (Clin. Soc. Trans., vol. xviii., p. 232) makes the following observation, which is of importance if it is found to be constant—viz, that, though the weapon may be held very close, there will be neither scorching nor powder—tattooing, if the bullet be driven by one of the modern fulminates contained in the same cap with the projectile." The following case of suicide which occurred during Sir Robert Sandeman's expedition through the Gomal Pass in January last may prove of interest to your readers, as it illustrates the correctness of Mr. Barwell's remark. M——, a Hindu, wandered away from our camp on the morning of Jan. 25th at Kajuri Kuch, and committed suicide by shooting himself with his revolver in the head. The man's body was found about 9 A.M. the same day by some of the Baluch Levy sowars who were with the expedition. On my arrival I found the suicide lying on his back quite dead, with a Webley's revolver (1890 pattern) in his right hand. There was a large wound of entry in the right temple, half an inch above and one inch and three-quarters behind the right external angular process, and a larger wound of exit two inches above and one inch behind the left mastoid process, but there was not the slightest scorching or blackening of the edges of the wound of entry from the effects of the powder, and I made a note of this at the time. The chambers of the revolver were all loaded except one, and that had recently been discharged. The man's body lay on the sandy bed of the Zhob river close to the bank, and tracking his footprints showed he had walked right up to the bank, had then turned and faced the sun, and, having placed the muzzle of his revolver against his right temple, had pulled the trigger. The footprints further showed he had, after discharging his revolver, managed to stagger seven steps away from the bank before falling to the ground. In the dead man's waistcoat pocket a slip of paper was found, on which was written a statement in his own handwriting saying he intended to commit suicide. I may mention the Webley's revolver referred to carries a ·450 cylindro-conoidal bullet and a heavy charge of powder; and that the man, hailing from the north of India, possessed a skin with but little pigment in it.

I am, Sirs, yours truly,

A. W. D. LEAHY, F.R.C.S.,
Officiating Residency Surgeon, Hyderabad, Deccan.

May 9th, 1890.

"BOGUS DIPLOMA MANUFACTORIES OF THE UNITED STATES."

To the Editors of THE LANCET.

SIRS,—That the large number of American students always to be found in England and on the Continent may be put in a proper light, and not be made to suffer additional indignities by the action of the University of Berlin, I beg space to reply to your article of the 19th ult., entitled "Bogus Diploma Manufactories of the U.S."

In 1889, forty-eight of our colleges required three or more courses of lectures,[1] and 114 required an entrance examination; of these, at least twelve require an entrance examination equal to the preliminary examinations of the Examining Boards of Great Britain, and none of these twelve have less than a three-years' graded course of study. They are Harvard, Yale, the University of Pennsylvania, University of Minnesota, University of California, College of Physicians and Surgeons in the City of New York (Medical Department of Columbia College), Albany Medical College (Medical Department of Union University), Niagara University, Chicago Medical College, Cooper Medical College, Saint Louis Medical College, and the Minneapolis College of Physicians and Surgeons. While some of these are comparatively young Colleges, others are old and well known, and all have faculties that have the entire confidence of the profession. We think it as unjust for men holding such diplomas to be denied recognition in Berlin of their time of study because a great many Germans obtained bogus American diplomas, as you think it unjust of France to refuse to recognise your best M.D.'s and Fellowships because a few years ago some of the licences were comparatively easy to obtain. We deny that European boards cannot tell the difference between our genuine and bogus diplomas. The Annual Report of the Illinois State Board of Health gives each year the names, time of charter, requirements for graduation, &c., of every college, genuine or fraudulent, existing now, or that ever did exist, in the United States and Canada. By referring to it, it will be seen that the Buchanan and other bogus Colleges were closed by legal process, disproving the statement made by Mr. Martin that "similar deficiencies exist in other States," from which you were led to believe that seven or more persons could charter a College of any kind anywhere in the United States.

I am, Sirs, yours faithfully,

DE WITT C. NEWMAN, M.D.

Spokane Falls, Wash., May 12th, 1890.

THE STAMPING-OUT SYSTEM AS A SUBSTITUTE FOR VACCINATION.

To the Editors of THE LANCET.

SIRS,—In answer to Mr. Henry Taylor: Leicester has for many years relied upon notification and isolation, and has enjoyed an immunity from small-pox. Sheffield, relying upon vaccination, neglected notification and isolation, and there was a very serious epidemic of small-pox. How can the immunity of Leicester be explained by "the presence of a large number of vaccinated people, who form a sanitary cordon round any infective centre," when at Sheffield this "sanitary cordon" was of no avail? The measures which I would venture to advocate for the suppression of small-pox are the principles of sanitation in the widest sense. To sum them up: (1) Prevention of filth and overcrowding; (2) compulsory notification; (3) compulsory isolation; (4) disinfection; (5) cremation. In the last century, owing to notification and isolation, small-pox was "*never* epidemical" in Rhode Island. At the present day our Australian colonies owe their immunity from epidemic small-pox to notification and isolation, and by these measures the disease when imported is promptly stamped out.

I am, Sirs, yours faithfully,

EDGAR M. CROOKSHANK.

King's College, London, June 3rd, 1890.

INFLUENZA IN BRAZIL.

To the Editors of THE LANCET.

SIRS,—It is a far cry to Brazil, and perhaps some benighted ones among your readers may think it so far as to be rather behind the times; but it is not so much as they may

[1] Annual Report of the Illinois State Board of Health.

imagine, for we have had the influenza here. Commencing down south in the Argentine Republic, where immigration from all parts of the world is going on, it gradually worked its way up the coast to Brazilian ports—Santos, Rio, Bahia, and last of all Pernambuco. One Englishman died in Santos from pneumonia following an attack of influenza. In this place (Pernambuco) I believe I had some of the first cases under my care on board the Western and Brazilian Telegraph Company's steamer *Norseman*. The crew consists partly of Englishmen, and partly of natives of Sierra Leone. The Englishmen were first attacked. Two cases had well marked eruption; there was very little catarrh or coryza, but the pains in the back and head (frontal and orbicular especially) and feeling of soreness all over were general symptoms; in one or two cases there was severe pain across the front of the body about the line of the attachments of the diaphragm. I send a copy of a Pernambuco daily paper (they have no medical organ here) which gives an account of the proceedings of the Medical and Pharmaceutical Association of Pernambuco, in which Dr. Cosme de Sá Pereira had the temerity to read before his colleagues some cases which he considered to be true influenza. I say temerity, for the medical faculty here do not seem to have recognised the disease yet. He remarks on the absence of the catarrhal state of the respiratory tract here in contrast to its frequency in Europe; and thinks that the difference is due to the climate. His colleagues, however, do not agree with him, asserting that there has been no case of influenza here, and that the cases he had brought before them were probably due to meteorological changes or errors of diet, and that the general absence of catarrhal symptoms put influenza out of the question. The only matter I would call attention to is as regards the infectivity of influenza, its commencing in Buenos Ayres, where great numbers of Italians, Russians, Germans, and people of other nationalities land every week; then follow Santos and Rio de Janeiro, which have few except Portuguese immigrants; and, lastly, Pernambuco, where there is no immigration at all. I have reason to believe that the first cases here occurred among Englishmen. Could it have been through letters?

On the whole, whetherdue to the difference of climate or not, the numbers attacked in Brazil seem to have been so few and the affection so mild as scarcely to be worthy of mention. I am, Sirs, yours faithfully,

Pernambuco, April 25th, 1890. J. TOPPIN, L.R.C.S.I. &c.

URINE TESTING IN PREGNANCY.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a letter which appeared in THE LANCET, May 27th, in which Dr. Fyffe, in criticising some observations of Dr. Herman's, objects to the inaccuracy of the tests he employed, the methods for which he fixes on me. Had Dr. Fyffe, instead of taking the statement at second hand, applied to me as to its accuracy, which should be the usual course, he would have learned that the method I had suggested to Dr. Herman was not mine, but that originally proposed by Hammarsten for the separation of serum-globulin from serum-albumen, and that I was in no wise concerned for the printer's error which in the report rendered "heated" for "treated." Since Dr. Herman's correction last week I have expected to hear from Dr. Fyffe expressions, at least of regret, for the annoyance such an attack might have given me, but as up to the present moment I have not heard from him, I must ask you to insert this letter. I am, Sirs, yours truly.

Queen Anne-street, W., June 4th, 1890. CHARLES H. RALFE.

DYSENTERY AS A CAUSE OF HEPATIC ABSCESS.

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of May 31st that Mr. Lowson, while commenting on his interesting case of abscess of the liver, expresses some surprise that I should have omitted referring to dysentery as one of the exciting causes of hepatic suppuration in the paper I read at the Leeds meeting of the British Medical Association. Had my paper been on pathology instead of treatment, I should most assuredly have referred to dysentery, as I think no one doubts the frequency of liver suppurations following on it. At the same time I should have to mention a number of other things—gall-stones even among the rest—as direct exciters of hepatic abscess. To have done so in a communication on treatment, in which I merely incidentally alluded to the most common, and probably least thought of, predisposing and exciting causes of the disease, would have made my paper far too long. I shall, however, on a future occasion consider the etiology of hepatic suppurations as a whole. In doing so we shall have to take into consideration the position of the liver, acting as a filter for the blood from the alimentary canal, before it enters the general circulation.—I am, Sirs, yours truly,

VAUGHAN HARLEY, M.B., M.R.C.P. Lond.

Physiological Laboratorium, Strassburg Universitat, June, 1890.

THE SOCIETY OF APOTHECARIES.

To the Editors of THE LANCET.

SIRS,—I shall be very much obliged if you will kindly publish the enclosed correspondence, and allow me to ask all members of the Society of Apothecaries to communicate with me with a view to united action if necessary.

I am, Sirs, your obedient servant,

ALBERT BENTHALL.

Cobham Lodge, Clarendon-road, Southsea, June 4th, 1890.

Society of Apothecaries, Blackfriars, London, E.C., June 3rd, 1890.

SIR,—The Master has handed to me your letter of the 31st ult. There was no want of courtesy on my part in not acknowledging your letter; but until the regulations are settled under which the limited number of licentiates are admitted by the Court of Assistants, it is impossible to give any information on the subject. A Court of Assistants will meet in the course of the month to settle these regulations, and when settled they will be published in the London daily papers, the papers of the large towns, and in the medical papers. Until then I am unable to give, and in fact have no power of giving, any further information.

Your obedient servant,

A. Benthall, Esq. JAMES R. UPTON.

(COPY.)

Southsea, June 4th, 1890.

SIR,—I beg to acknowledge your letter of June 3rd, and I am glad to hear that there was no intentional want of courtesy to a member of the Society. I gather from your letter that the Court of Assistants intend to settle and publish a scheme fundamentally altering the constitution of the Society, and deeply affecting the position of the members, without calling a meeting or in any way consulting them.

It may be that the new scheme is in every way desirable; but, at any rate, it should be placed before the members before it is definitely decided upon.

I am, Sir, your obedient servant,

ALBERT BENTHALL, M. & L.S.A.

J. R. Upton, Esq.

ELECTRICITY: ALTERNATING AND CONTINUOUS CURRENTS.

To the Editors of THE LANCET.

SIRS,—I have read the letter of Mr. Newman Lawrence to which Dr. Harris refers, and also the paper under discussion, but I fail to see that Mr. Lawrence has demonstrated the fallacy of Professor Forbes's arguments. It appears to me that the "fallacy" consists in Mr. Lawrence, after quoting the "learned professor's" remarks concerning the maximum current, proceeding to treat it as the mean current, and to express it in milliampères, forgetting that the milliampère is the quantity per second, whilst the maximum occupies but the fraction of a second, that fraction being inversely as the maximum divided by the mean; but Professor Forbes's estimate is, in my opinion, much below the mark in putting the maximum current at 20 to 50 times the effective current; I think 200 to 500 would be nearer, as the volts (on break) of an induction coil may be reckoned by thousands and tens of thousands, and in the case of very large coils by hundreds of thousands. It would be well if Dr. Harris and Mr. Lawrence would repeat their experiments with an alternating dynamo or alternated battery current of moderate tension—say, 20 or 30 volts—as the disruptive and unequal alternation of an induction coil are quite unsuited to the object they had in view.

I am, Sirs, yours faithfully,

FREDERICK GEORGE, M.D.

Uley, Gloucestershire, May 13th, 1890.

INSPECTION OF EMIGRANTS.

To the Editors of THE LANCET.

SIRS,—It is greatly to be deplored that there should have happened such a serious mistake in the case of the inspection of the emigrant woman from Sweden who was suffering from leprosy; but until the present arrangements in this country regarding the disposal of emigrants are altered such occurrences must inevitably be the consequence. The ship surgeons cannot be blamed for such mistakes, as they cannot have the necessary time to devote to a careful examination of each intending emigrant to America. Several years ago I proposed a plan which would have removed all chance of mistakes happening, and I recorded my suggestions in a paper in one of your contemporaries, but I am sorry to say that the authorities took no action in the matter. All this is very different from the way they manage emigration affairs in the United States, where the service is properly supervised by thoroughly competent and capable medical officials.—I am, Sirs, yours truly,

JOHN COCHRANE, L.R.C.P. & L.R.C.S. Ed., &c.,
Formerly Surgeon in Government Emigrant Service, and passed Surgeon, Royal Navy, 1875.

Kirkcowan, Wigtownshire, N.B., June 3rd, 1890.

THE CHURCH OF ENGLAND PURITY SOCIETY AND THE SUSPENSION OF THE CONTAGIOUS DISEASES ACTS.

To the Editors of THE LANCET.

SIRS,—May I call your attention and that of those practitioners who are aware of the alarming increase of primary syphilis in our garrison towns and naval stations since the suspension of the above Acts to the action of some members of the Church of England Purity Society at its recent conference, and venture to hope that, individually and collectively, they should heartily support the Society in its proposed action. This action is, I believe, to take the form of a petition to Government, praying for an immediate inquiry into the moral condition of our seaports and garrison towns. The inquiry, if granted, must reveal the disastrous consequences to the health of the community of the suspension of the Acts, an accurate knowledge of which should no longer be withheld from the public; for to quote from the letter of Colonel Everitt, the Society's Secretary, to the *Daily Chronicle* of May 26th: "Unpleasant questions, which are merely hidden out of sight as long as possible, inevitably assert themselves at last in an aggravated form." The increase of preventable venereal disease is a question the discussion of which must be reopened, and that without delay, unless we desire to perpetuate a condition of affairs which is already a scandal to our national sanitary administration.

I am, Sirs, yours faithfully,

E. J. LAWLESS, M.D. Brux., D.P.H. Lond.

Junior Constitutional Club, S.W., May 28th, 1890.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

"*Ye Apothecarie, His Booke of Receipts.*"

I HAVE just seen an interesting manuscript which is about to be published by subscription in a very unique form—namely, in lithograph facsimile of the handwriting. As it consists of nearly 200 quarto pages, this will be a rather serious undertaking. The volume is about 300 years old, and shows a variety of quaint penmanship extending over a long period—not far short of two centuries. It has evidently been for some time in the family of Lord Fairfax as the names of at least a dozen of that nobleman's relatives are found appended to receipts. There is in the earlier portion a description of what "Quene Mary was wont to take for ye passim of ye harte"; also such directions as how "to know whether a sick man shall live or die, certenly prooved manie tymes." Although the main substance of the book is medical, there is a large number of receipts for dyeing, bleaching, baking, and preserving after the manner of our grandmothers of three centuries ago. To such of the profession as love curious and ancient lore the volume should furnish many an hour's delight. The original manuscript is in the possession of Mr. George Weddell, 20, West Grainger-street, Newcastle, who will show it to anyone interested, for a few weeks, before putting it into the hands of the publishers, Messrs. Manson, Swan, and Morgan, of this city. Mr. Weddell has lately shown the book to the experts at the British Museum, by whom it was examined with much interest, and who were able to verify the ancient date of the paper upon which the book is written, and the place of its manufacture. It is interesting to contrast the receipts of three hundred years ago with the elegant pharmacy of the present day.

Berwickshire Naturalists' Club.

The first meeting of the season of the Berwickshire Naturalists' Club took place last Wednesday, at Beanley, Northumberland. The weather proved most favourable, and the meeting was a large and very representative one. It was further signalised by a presentation to the veteran secretary, now Dr. James Hardy, as the University of Edinburgh has very recently conferred the degree of LL.D. upon him. Sir Wm. Crossman, in making the presentation, which consisted of a handsomely illuminated address, with a cheque for over £400, subscribed by some two hundred members, mentioned that Dr. Hardy had since 1839 contributed no less than 219 papers to the Proceedings, adding much to the information given by many eminent botanists before him, notably Dr. George Johnston, the founder of the club; and although Dr. Hardy's contributions had been principally on botanical and entomological subjects, yet he had also worked in zoology and archæology, and so enriched their Transactions.

Artisans' Dwellings in Newcastle.

The overcrowding of the dwellings of the artisan class in Newcastle has long been an acknowledged evil; at the same time it seemed difficult, if not impossible, to grapple with it, owing to the want of suitable accommodation in the neighbourhood of the large factories. At a meeting of the Town Improvement Committee of the Corporation last week important plans were considered, which will doubtless be sanctioned after some modifications, for the erection of a large block of superior artisans' dwellings on the flat system, which has never been fairly tried in Newcastle, notwithstanding the large Scotch element in its working class population and its contiguity to Scotland.

Borough of Tynemouth Water-supply.

A gigantic scheme is mooted to supply the borough of Tynemouth (which, it may be mentioned, includes North Shields, Whitley, Cullercoats, and numerous coast villages) with water. The population included in the borough of Tynemouth cannot now be far short of 60,000. Hitherto it has been dependent for its water from uncertain sources, and there have been many complaints as to its quantity and quality. The last description of the water-supply by the medical officer of health and a chemical expert was sufficient to show its dangerous nature. It is now proposed to supply the borough from the river Coquet, about fifty miles north. The water of the Coquet is about the purest obtainable, as it abounds in springs and has the Cheviot hills as a watershed. This would be a great undertaking, and it is stated would probably cost £200,000, but it is not too much if the necessity for pure water at Tynemouth is fully considered and its full advantages to the health and industries of the borough are taken into account.

South Shields.

The first annual meeting of the Nursing Guild in connexion with the St. John Ambulance Brigade at South Shields was held in the Town Hall last Friday, and there was a large attendance. It was explained that the associates were thirty-two in number, of whom twenty-two were honorary members, and assisted in many ways the other ten ladies, who did the actual work of visiting and nursing. Bishop Sandford, Surgeon-Major Hutton, and Mr. J. C. Stevenson, M.P., commended the work of the Guild.

West Hartlepool.

On Saturday morning last an iron worker at the West Hartlepool iron rolling mills, by some unknown means, got between the blades of a huge pair of shears used for cutting scrap iron, and his head was severed completely from his body. From the evidence given at the inquest, it would appear that the unfortunate man was in a desponding state of mind a few months ago, and had then threatened to commit suicide. An open verdict was, however, returned.

The Health of Jarrow in 1889.

Dr. A. Campbell Munro, medical officer of health of Jarrow, has issued his annual report for 1889, which deals exhaustively with every question affecting the health of the borough. He remarks that while the health of the town, judged by the death-rates, had not maintained the high level of the last two years, it must be considered in some degree satisfactory that, in spite of the coincidence in one and the same year of an epidemic prevalence of measles, a hot early summer with a sequent high rate from diarrhœa, and the untoward climatic conditions of the latter part of the year (which have told so disadvantageously upon the health of the north-eastern districts especially), the gross death-rate did not rise above 21·2 per 1000 of the population. The births occurring in the borough during the year were 1224 in number, and furnished a birth-rate of 39·5 per 1000 of the population, being 3·4 per 1000 above the rate of 1888. The rise, Dr. Munro thinks, is undoubtedly intimately associated with the industrial prosperity of the time. Six hundred and twenty-two deaths were registered as having occurred in the borough during 1889, which with the thirty-seven deaths in the Harton Workhouse amongst persons sent there from Jarrow furnishes a death-rate of 21·258 per 1000 of population. The *Newcastle Chronicle*, in commenting upon Dr. Munro's report, says the good times "have been responsible for the greater amount spent upon drink; now that they are credited with adding to the population they have a lot to answer for."

Newcastle-on-Tyne, June 4th.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

Post-graduate Session.

THOSE who have had the lecturing and teaching to do during the post-graduate session for the last five years have felt for some time the strain of the additional burden. Many of the lecturers have had to arrange their holidays specially to suit this course, while not a few have had to curtail their holiday for a like reason. When it is remembered that the majority of those giving instruction during the post-graduate session are men who immediately on its termination begin a laborious winter session of five months' duration, it will be understood that the extra three weeks is a considerable additional strain. It is largely because of this feeling that the post-graduate lecturers, as a body, have decided not to have any formal or complete set of lectures and classes this autumn for graduates, although they look forward to again providing a course next year. While this is the decision of the lecturers as a body, it is expected that several individual teachers may provide short courses on some of the special and the more practical subjects.

St. Bernard's Well.

This is a sulphur spring in the vicinity of the city, which several years ago was put into order and suitably furnished by the liberality of one of our citizens. Since then it has been a good deal frequented. The water has recently been analysed by Dr. Stevenson Macadam, and it appears that, for the present at least, the sodium sulphide and sulphuretted hydrogen which the water usually contains are absent, and that it contains considerable organic impurities which render it quite unfit for dietetic purposes.

Health of the City.

The death-rate last week was 18 per 1000, and the total number of deaths 92; of these 35 were due to chest diseases and 13 to zymotic diseases. The intimations for the week included 17 scarlatina and 43 measles.

The Profession at the Assemblies.

The profession, as a rule, does not take a prominent part in the theological discussions at the general assemblies of the various churches. This year's Free Church Assembly was signalised, amongst other things, by the part Professor McKendrick of Glasgow took in the debate on what are known in Scotland as "heresy cases." He defended the heretics, and argued in favour of freedom of criticism.

Royal Edinburgh Asylum for the Insane.

Dr. Clouston's annual report of this asylum has just been issued. He begins by drawing attention to two facts—namely, that the physical condition of the patients admitted during the last quinquennial period is lower than during the two preceding, and that there is an increase of 47 per cent. of cases of senility during the same period. The latter class, owing to the care bestowed upon them, have their lives prolonged, and they tend therefore to accumulate. He grudges the elaborate and costly nursing system for the care of such cases, and he points out that their increasing numbers lower the recovery rate from year to year. He dwells on the possibility of a large portion of those who live well on into the last of Shakespeare's seven ages being in the next generation shut up in asylums. From this he turns to the most common symptom of mental disease—the loss or diminution of the power of control. He shows that in our civilisation desires or cravings become more numerous, that with this there is a corresponding multiplication of the controlling forces, and therefore the brain has become a very delicate organ. Three things seem to specially make for breakdown: (1) The number and variety of men's cravings which represent their needs; (2) the complication and strength of the inhibitory powers required to regulate and control those cravings; and (3) the frequent tendency of the cravings and desires to mistake their real objects. This is illustrated by the relations of insanity with the craving for drink. The increase in the number of cases due to alcohol admitted during the year is dwelt upon, and its relation to increased trade and a rise of wages is discussed suggestively. He then deals with the question of legislation for habitual drunkards, and shows how undesirable it would be to send such cases to our present asylums.

Edinburgh, June 5th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Death of John Andrew Baker, F.R.C.S.I.

THIS gentleman died at his residence, 7, Clare-street, on the 30th ult. He studied at the Dublin University and at the Middlesex Hospital, London, and obtained the Fellowship of the Royal College of Surgeons in Ireland in 1853. He was also for some time a member of council of that institution, and a member of the Royal Irish Academy. He was a vice-president of the Odontological Society of Great Britain, and surgeon dentist to Steevens' Hospital. His contributions to medical literature included a paper on the treatment of neuralgia by the local application of chloroform vapours.

Health of Ireland for March Quarter.

The births numbered 27,471, or 23·4 per 1000, and the deaths 28,789, or 24·5 per 1000, being an increase of deaths over births amounting to 1318. This large death-rate is the highest recorded during any quarter since the establishment of registration in the year 1864, and it is 2·8 in excess of the average rate for the March quarter of the past ten years. While the mortality was so much above the average the births were considerably less than usual; the increase in the death-rate being due chiefly to the heavy mortality from affections of the respiratory system. Influenza prevailed extensively, while measles was very fatal in Belfast. Whooping-cough prevailed in Dublin, Belfast, and Londonderry, and typhoid fever caused numerous deaths in Dublin and Belfast. Compared with those for the March quarter of 1889, the returns of pauperism show an increase of 591, or 1·3 per cent., in the average number of workhouse inmates on Saturdays during the quarter, and a decrease of 17 in the average number of persons on out-door relief.

Mr. Langley Tuthill has been elected medical officer of Portlaw dispensary district, in the room of the late Mr. James Martin.

Mr. Frank Newell, house surgeon to the Meath Hospital, has been elected medical officer to High-street Dispensary, South Dublin Union.

The governors will hold an election for a surgeon to County Monaghan Infirmary on the 14th inst. The emoluments of the post are £92 6*s.* 2*d.* per annum.

Dublin, June 3rd.

BELFAST.

The Royal Hospital.

At the quarterly meeting, held on May 26th, it was reported that during the previous three months there had

been 504 intern patients—viz., 271 surgical and 233 medical. During the same period there had been 5030 extern cases. At the close of last quarter the balance against the hospital was £1167 19*s.* 7*d.* ; at the close of the quarter ending April 30th, the debt had risen to £1707 19*s.* 3*d.* The total receipts from all sources, up to the end of April, had been £5947 13*s.* 9*d.*, the expenditure for the same period amounting to £6008 2*s.* 7*d.*, showing a deficiency of £60 8*s.* 10*d.* ; but as there is included in the receipts a bequest of £500, which must be invested, the expenditure has exceeded the income by £560 8*s.* 10*d.*, which added to the deficiency previously existing, shows an indebtedness of £1707 19*s.* 3*d.* Special attention was, at the meeting, called to the very great need of accommodation for consumptive patients. At present there are only ten beds in the consumption department, a number totally inadequate to cope with the large number constantly applying for admission. Dr. Croker was appointed house-physician, in room of Dr. McQuitty, resigned. Hospital Saturday was held on May 24th, the amount collected being £324, a sum considerably larger than last year.

The Belfast District Lunatic Asylum.

The sixteenth annual report of this asylum has just been issued by the superintendent, Dr. A. S. Merrick. During the year ending Dec. 31st there were under treatment 853 patients (472 males and 381 females). There were 167 discharges and 33 deaths. The average daily number resident during the year was 651 (being an increase of 13 over the preceding year). There were proportionately more cases admitted from the city of Belfast as compared with co. Antrim, due to the steady increase in the city population, more especially in the artisan and labouring classes, from which the asylum population is more especially derived. All the available dormitory space is now severely strained to meet the requirements of accommodation for the new admissions. The question of providing increased accommodation has occupied the attention of the board during the past year, and a final resolution has been adopted to the effect that the best and most efficient solution of the problem would be to retain the present asylum for the city and erect an asylum for co. Antrim in some central locality in the county. If this scheme is carried out, the present asylum will meet the requirements of the city for twelve years to come, and, at the same time, many useful improvements in the classification and detail of management can be carried out. Dr. Merrick thinks that on financial and professional grounds this will be the most feasible and efficient plan. He mentions that a considerable number of the city patients, especially those working in mills, where there is usually a high temperature, are quite unfit for out-door employment, except in very mild weather, and he suggests that workrooms might be provided for them. He points out, also, that in some of the district asylums schools have been provided with the very best results to the inmates, and he suggests these changes in the event of additional asylum accommodation being obtained. The reports of Sir John Nugent, Inspector of Lunatics, on the condition of the asylum, are added.

Brigade-Surgeon McFarland has been re-elected President of the North of Ireland Branch of the British Medical Temperance Association.

Belfast, June 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Health and Exercise.

THE importance of the old maxim "mens sana in corpore sano" is becoming more appreciated in this country, and it is gratifying to know that the French attribute to English importation many of the improvements that have been introduced in gymnastics and all kinds of healthy exercise which are now extensively practised, even in the pent-up playgrounds of Lycées. Even football is now fairly launched as a pastime of French youth, although it is not twenty years since "Le Kick Ball," as it is termed by the French, was looked upon as a barbarous and dangerous pastime, only fit for the "sons of perfide Albion." Football, however, is not in so much favour as other games, such as cricket and lawn-tennis. Matches take place daily around Paris and in the provinces, not only between English and French, but also among themselves. Such exhibitions are found far more useful than fencing schools, which only serve to foster the tendency to duelling without contributing so much to the general development of the body. But, as remarked by Dr. Lagrange in his work on the "Physiology of Exercise" (for which he received a prize from the Academy of Sciences), these exercises should be regulated in such a manner as to produce their full utility. After having described the inconveniences and the dangers of "muscular immobilism," Dr. Lagrange indicates how the taste for exercise is lost, and suggests as a remedy the substitution of natural for artificial exercises. Children should be allowed to play instead of having to follow the stiff rules of gymnastics. As regards athletic gymnastics, Dr. Lagrange observes that they can be applied only to certain rare constitutions possessing latent natural force. Such exercises produce partial muscular hypertrophies, but are perfectly incapable of generalising this universal working of the muscles harmoniously. Moreover, force does not precisely imply sound health, and it has been remarked that athletes frequently succumb to phthisis. The *rôle* of exercise in hygiene is to prevent abnormal supremacy of the brain over the rest of the body. To wish to raise this latter above the "physique" is to place "the cart before the horse." However, the open air is indispensable to arrive at this object. On comparing the peasant with the workman one sees how far exercise in fields differs from that in the workshop, as regards their sanitary results. Allowance has to be made for the variation of growth in children. In order to ensure thoracic development, the exercise of running is indispensable to youth. The indications for the two sexes are different. In the young girl attention must be particularly directed to the development of the pelvis, and he pointed out the inconveniences of gymnastic appliances for this purpose. He therefore recommended dancing, skipping, lawn tennis, battledore and shuttlecock, &c. Strange to say, Dr. Lagrange condemns equestrian exercises for women. Acrobatic gymnastics, according to the author, are far from being exempt from danger. The instinct of the child is the natural guide for the amount of exercise. Dr. Lagrange observed that no exercise should be taken without a certain amount of training or preparation, and that this should be measured according to the strength of the individual. The best criterion of the state of training is, according to the author, the limpidity of the urine after work. Children should be allowed to take exercise along with their companions, and to cry out as much as they wish.

Hypnosis and Gabrielle Bompard.

Last week Dr. Brouardel was deputed to examine the mental condition of Gabrielle Bompard, who is awaiting her trial as an accomplice in the murder of M. Gouffé. He was accompanied by two *confrères*, who submitted her to certain experiments, from which they concluded that Gabrielle Bompard obeyed, with surprising docility, the least hypnotic suggestion. In a moment she was plunged in a most profound sleep, and during that time she obeyed all suggestions, not only verbal, but mental. The most surprising movements, the most irregular acts, she executed immediately by the mere command by thought. Very much fatigued by these experiments, she was conducted to her cell and received the visit of an advocate. In conversation with this functionary she was seized with an attack of hysteria, which lasted four hours, and was interrupted by divers cataleptic phenomena. According to the report of Dr. Brouardel, Gabrielle Bompard may be considered a unique subject. This report will certainly raise questions of the greatest interest relative to the responsibility and the culpability of hypnotic subjects, as Gabrielle Bompard is supposed to have been under the influence of hypnosis when she drew the unsuspecting bailiff into her little apartment, which he never left alive. Lovers of the marvellous will have it that this young woman acted with the unconsciousness of a somnambulist. But this is not the opinion of Professor Charcot. He does not believe all that has been related about hypnotism and suggestion. That suggestion would cause one to commit a crime had never been observed at the Salpêtrière, where every form of hypnotism may be witnessed.

Paris, June 3rd

FOOTBALL CASUALTY.—Peter Kinmond, a mill-worker, of Kinnaird-street, Dundee, whilst playing at football last week, fell and fractured his right thigh-bone.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Hufeland Society: Prize Questions.

AT the meeting of the Hufeland Society on April 10th it was resolved, on the recommendation of the President, to announce two prize questions: (1) The Influenza Epidemic in 1889–90. After a historical retrospection of former epidemics of this kind, a general survey is to be given of the course taken by the disease in 1889–90, followed by an analysis of its etiological relations, the pathology and therapeutics of the latest epidemic, and of the diseases observed in consequence of the influenza. (2) On the Penal Responsibility of the Physician in the Administration of Chloroform and other Anæsthetics by Inhalation. For each of these themes a prize of 700 marks is to be awarded. The essays must be delivered by April 1st, 1891, addressed to Professor Liebreich, Berlin, N.W., Dorotheenstrasse 34A. Each essay, which must be written in German, English, or French, must be provided with a motto, which is to be repeated on a sealed envelope, containing the name of the author. The essays not found worthy may be returned to the author, if desired, till October 1st, 1891. The result of the prize questions will be made publicly known on July 14th, 1891.

The Anti-bacterial Power of the Blood.

The theory of the Russian investigator Metschnikoff, that when dangerous bacteria enter the body a conflict takes place between them and the colourless blood-corpuscles, has been made the subject of further investigations by the physiologist H. Buchner, who has arrived at the conclusion that the anti-bacterial power of the blood does not depend on the said corpuscles alone, but also on a definite peculiar condition of the albuminoid bodies of the serum.

The Bones of the Little Toe.

An investigation of the bones of the little toe by the anatomist W. Pfitzner has led to an interesting result. The idea that the frequent growing together of the middle and end bones into one is due to the pressure of tight boots would entail the corollary that the phenomenon in question would be considerably more frequent in women than in men, whereas Pfitzner has found that the difference of percentage is hardly worth mentioning. He has also ascertained that it is about as frequent in children and in embryos as in adults, and that it is found among peoples who have never, or only for a short time past, wore anything on their feet. These facts, and the perfectly normal appearance of the coalesced bones, suggest the theory that this phenomenon indicates the normal involution of the little toe and the origin of a new mark of race, going on in their first beginnings before our eyes.

The International Medical Congress.

The Imperial Office of Health will be represented by a special exhibition at the International Medico-Scientific Exhibition, to be held in connexion with the International Medical Congress here next August. The medical department of the Prussian War Office will exhibit its apparatus for the rescue and treatment of the wounded &c. with all possible completeness. The producers of pharmacological preparations, opticians and instrument makers, bandage makers, and other industrial servants of scientific and practical medicine, will exhibit their best work. Governmental institutions, laboratories, and clinics have also promised their coöperation, and it is expected that the larger German cities will make their sanitary arrangements known on this occasion as perspicuously as possible. The exhibition office will receive announcements until June 15th. Address, Ausstellungsbureau, Karlstrasse, 19, Berlin. The medical department of the French army will be represented at the Congress by Messrs. Kelch, Regnier, Schneider, and Nimier.

The Royal Sanitary Commission met recently to consider the question of appointing health inspectors in Berlin, and elected a committee to devise the further steps to be taken.

Berlin, May 27th.

TRIPLETS.—The wife of a mechanic residing at Niton, Isle of Wight, was delivered by Mr. Horace Lowther of Ventnor, on the 26th ult., of three children, a boy and two girls. Mother and children are doing well.

Obituary.

GEORGE TUPMAN FINCHAM, M.D. OXON., F.R.C.P.

BY the death of Dr. Fincham, consulting physician to the Westminster Hospital, the profession has lost one of its worthiest members, a man of singular nobility of mind and strong affections, who combined a keen sensitiveness for the feelings of others with much indifference to the world's opinion or applause. Educated at Westminster School, King's College, London, and St. John's College, Oxford, Dr. Finchman graduated in Arts in 1839, and in Medicine in 1843, taking his doctor's degree in 1847. His early medical education he obtained in Dublin and at St. George's Hospital, and in 1855 was elected a Fellow of the College of Physicians in London. In 1853, at the age of thirty-five, he was appointed assistant physician to the Westminster Hospital; became full physician two years later, and in 1877, on the retirement of Dr. Basham, senior physician, a position he occupied for seven years, retiring on the completion of his full term of office in 1883. Thus the length of his active service was thirty years, and during the whole of that time, as many remain to tell, his devotion to his hospital duties, both as teacher and physician, never flagged. On his retirement he was appointed consulting physician to the hospital, and continued to take an active concern in its welfare up to the day of his death. At the College of Physicians Dr. Fincham was a constant attendant, and the many offices he held testify to the esteem he inspired in those who knew him best. He was for three years examiner in medicine, thrice elected councillor, twice censor, in 1883 senior censor, and in 1885 vice-president.

It is perhaps true that Dr. Fincham's clinical teaching was too sedate and his opinion too guarded to be brilliant or attractive; it accorded with his whole character in its modesty, reserve, and contempt for display. The advocates of dogmatic teaching would find much wanting and much amiss in his habitual caution, open-mindedness, and even diffidence. But those who had the best opportunity for judging, his colleagues and senior pupils, had a reliance on his insight and clinical sagacity which he himself seemed to disclaim. It may be that his methods like his manner belonged to the old school rather than the new, in his careful scrutiny of individual symptoms, and the importance he attached to attitude, manner, and facial expression, matters somewhat disregarded by the younger students, and in discourse of which they soon weary; but there are many of his former pupils now in practice eager to express their obligation to their old teacher for showing them, both by precept and example, how to observe disease.

When, by the operation of an inflexible law, Dr. Fincham retired from the Westminster Hospital, to the regret of all those who had been associated with him, there arose a strong desire to do him honour, a desire so general and spontaneous that to this hour no one can say with whom the idea of a testimonial originated. That Dr. Fincham had much respect or affection for testimonials taken in the abstract the present writer permits himself to doubt, but he knows as well that this mark of attachment from his old friends deeply touched him. It could hardly have been otherwise, for the contributors represented a wide circle, confined to no one class or faith or profession, but drawn together by a common desire to show respect for a most loveable character.

It would be untrue to say that Dr. Fincham occupied what is sometimes called a commanding position in his profession. Though he was never cynical, he would have repudiated any wish for such a position with something of scorn. But he influenced many, and for those that knew him his society and conversation had a singular charm. His friendship was elevating, and one felt the better for his company, less censorious, less self-seeking, less vulgar.

In such guise it is certain that his memory will live long amongst his colleagues and pupils. Of the rest, of the happy circumstances of his domestic life, it is not for us to speak, or fitting to speak here. Yet even in these poor words enough of his character is perhaps revealed to justify our estimate of his worth and elicit sympathy for his sorrowing widow and children in their great loss.

DR. MARTIN DE BARTOLOMÉ.

SHEFFIELD has lost an admirable practitioner and exemplary citizen in Dr. de Bartolomé, who died on the 2nd inst. of heart failure, in his seventy-seventh year.

Born of an old Castilian stock in Segovia, where his father was civil governor of the province, young de Bartolomé at first received a military education in the local Artillery College, till the restoration of Ferdinand VII. drove the family, with others of the same Liberal school, from Spain to England. In Jersey the young refugee married Miss Parker of Sheffield, and on their marriage settled in that town as a student of medicine. He proceeded, in due course, to Edinburgh, where, having matriculated in 1833, he passed M.D. in 1838, being among the twenty-one "optimi" of his year out of ninety-eight graduates. For the last three years of his curriculum he acted as assistant in the laboratory and lecture room to the professor of Materia Medica, Sir Robert Christison.

He began professional life in Sheffield about 1839, and was in the following year elected honorary physician to the Public Hospital in West-street. In 1846 he became physician to the Infirmary, and in 1866 senior physician to that institution. By this time he was the local leader of the profession—a position he honourably earned by his centripetal insight into the complex causes of disease, and by his prompt, circumspect, and successful treatment. As a teacher, in the local school of medicine, he gave Sheffield a considerable name, by his sound exposition and the almost paternal pains he took with his young pupils. When the school, mainly through his exertions, had to seek a more spacious *locale*, he laid the foundation-stone of the new building, and shortly after its opening in June, 1887, was presented with his portrait, which now hangs in the library of the institution, in token of his signal services to the medical cause in town and country. In addition to his professional work—prominent in which was his organisation of the local branch of the British Medical Association, at whose Congress in Sheffield in 1876 he acted as president—Dr. de Bartolomé did much for science and literature among his fellow-townsmen, being mainly instrumental in founding the Sheffield Athenæum, of which he was president for nearly thirty-five years. Indeed, there were few public movements for the advance of local interests, material and moral, in which he did not take an honourable part, insomuch that it was with a sense of something like personal bereavement that the citizens of Sheffield heard of his sudden death. He died, it may be said, in harness, having seen his patients not many hours before he was, while in the act of dressing, overtaken by syncope. By his first wife, who died in 1858, he left no family. His second, who was daughter of the late Mr. S. Jackson of Attercliffe, survives him, with four sons and four daughters, the issue of their marriage.

JOHN SCOTT, M.R.C.S.,

INSPECTOR-GENERAL OF HOSPITALS.

WE have to record the death of Mr. John Scott, late Principal Inspector-General of Hospitals in the Bombay Medical Service, which took place at his residence, 43, Inverness-terrace, Hyde Park, W. Mr. Scott was born on Jan. 7th, 1805, and was a son of the late Mr. Charles Scott of Criggie, in Forfarshire. He was educated at the High School in Edinburgh, and afterwards at the Edinburgh University. On obtaining his diploma as a surgeon, Mr. Scott was, in January, 1827, appointed an assistant surgeon in the Honourable East India Company's service. After arriving in India he was attached to the European Hospital, and then took charge of a regiment of Madras infantry, and of the civil duties at Sholapore, and subsequently at Sassoor. In May, 1829, Mr. Scott was attached to H.M.'s 4th Light Dragoons, and served with that regiment till March, 1831. He was afterwards placed in charge of the Vaccination Department in the Deccan. He was present at the attack and capture of Aden. During Lord Clare's governorship of Bombay Mr. Scott was selected to be his personal surgeon, and remained on his lordship's staff till the governor left for England. Mr. Scott was next appointed Garrison Surgeon of Bombay, and in 1846 was appointed Secretary to the Medical Board, an appointment he held for several years, and in it earned the esteem of the whole service. In October, 1857, he was appointed Inspector-General of Hospitals, a post which he retained when the Government of India was taken over by the Crown after the Mutiny; and after rising to be the Principal Inspector-General of Hospitals, and at the head of the Medical Service in Bombay, Mr. Scott, in June, 1862, retired from the service after a long and honourable career of thirty-five years' service, carrying with him the esteem of all who knew him. Mr. Scott married, in 1847, a daughter of the late General Moore, H.E.I.C.S., who survives him, and by whom he had two sons and two daughters, all of whom are left to mourn their loss.

R. C. R. JORDAN, M.D. LOND., M.R.C.S., L.S.A.

ON May 24th Robert Coane Roberts Jordan passed away at his residence at Teignmouth, to which town he had removed on account of failing health about five months previously from Birmingham, where he had practised for thirty-three years. During this period there accrued a continuous growth in the demand for his professional advice. He was born at Teignmouth in 1825. In 1846 he entered as a medical student at King's College, London. Dr. Jordan was house physician to King's College Hospital in 1850, and was subsequently elected an Associate of the College. He became an L.S.A. in 1849, and in the course of his medical studies obtained several prizes. In 1853 he took the degree of M.D. His first connexion with Birmingham was as a medical tutor at Queen's College. Afterwards, on the formation of Sydenham College, he was appointed to the chair of Physiology, which post he continued to hold until the amalgamation of the Queen's and Sydenham Colleges. For many years he held important honorary appointments connected with the medical charities of the borough. When it became known that declining health necessitated his removal from Birmingham, a farewell testimonial was spontaneously decided upon. A sum of money was privately subscribed and presented to him as a testimony of friendship and esteem and of unaffected regret at his leaving the town.

ROBERT HENRY SPENCER CARPENTER, L.R.C.P. & L.S.A. LOND.

A WELL-KNOWN figure has recently passed away in the person of Robert Henry Spencer Carpenter. He was born in the year 1823, and died on May 14th, 1890, and was therefore sixty-seven years of age. He was the son of a medical man in large practice in Bristol, and was sent by his father to Durham University, in the hope that he would succeed to the practice, but his father died suddenly and before Carpenter had taken his first diploma, which he did in 1860, and practised in Durham until 1869. He then came to London, and practised first at Peckham, then in the Commercial-road East, and finally at Brixton, where he had lived thirteen years when he died.

About the year 1877 Mr. Carpenter started the East London Medical Association, and speedily proved that if only medical practitioners would stand shoulder to shoulder for the mutual protection of their hardly-earned privileges no power existed that could withstand them. Sixty or seventy prosecutions against illegal practice were instituted, and in almost every case the prosecuted quack had to pursue some other calling. Latterly the Association changed its name to that of the Medical Alliance. Dr. Lush's Medical Bill, described by the Duke of Richmond and others as the best Bill ever presented to Parliament, was drafted by Mr. Carpenter, and it paved the way for the introduction of a Bill afterwards by the Government of the day; and finally the amended Medical Act now in force was passed in 1887, after the Bill of the previous year had been withdrawn in consequence of the block of Mr. Hopgood, Q.C., who was convinced by the deceased that, as drafted, the Bill, if passed, would damage the interests of the great bulk of the profession. Mr. Carpenter at that time saved the profession from a great disaster, for had that Bill passed the penal clauses of the Apothecaries Act of 1815 would have been repealed, and nothing could have prevented anybody practising as long as no medical title was assumed. Mr. Carpenter deserves the kindly remembrances of his fellow general practitioners, for in their interests he sacrificed both time and money. He was a man of great determination of character. His

unfortunate deafness interfered with his great personal influence. Naturally he was a kind and considerate man, but he spared neither friend nor foe in his endeavours to expose and denounce what he thought was wrong.

J. HOWELL THOMAS, L.R.C.P. LOND., &c.

THAT gladness and sorrow go hand in hand has received a striking local illustration during the last week. Whilst the Congregationalists of Wellingborough were celebrating the reopening of their beautiful sanctuary on the 29th ult. Mr. J. Howell Thomas, L.R.C.P. Lond., M.R.C.S., a much-esteemed member of the Church, and the son of a beloved minister of old Salem Chapel, succumbed to the disease (consumption) against which he had long bravely striven. Mr. Thomas matriculated at the London University, but did not pursue his studies for the M.D. of London. He took his qualifications at the earliest possible age—viz., on his twenty-first birthday,—and immediately afterwards was appointed house surgeon to the London Hospital, at which school he studied, afterwards fulfilling the offices of resident accoucheur and assistant medical officer successively. From London he went to Bristol, and was appointed physicians' assistant to the Bristol General Hospital, holding that post for eighteen months. He started in practice in Wellingborough in 1876, and in 1881 was appointed medical officer of health to the Wellingborough Rural Sanitary Authority, a post which he filled with honour to himself and great satisfaction to the Board. His death was doubly sad, as Mr. Thomas was only in his thirty-ninth year. His death will occasion sorrow, not only among his immediate associates and friends, but in a far wider circle. Skill in his profession was combined in a remarkable degree with conscientiousness and a deep and practical sympathy with the poor. He was in the best sense a friend of the people, and in many a cottage home his death will be regarded as a personal loss. Wellingborough was his birthplace, and his native town is the poorer by his death, but though he has gone over to the majority his devotion to duty and the practical goodness of his life will long survive him, endearing his memory to those amongst whom he moved. He leaves two sisters and a brother to mourn their loss.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the Examination for M.B.:—

First Division.—Edward Robert Chas. Earle and Harold Muir Evans, University College; James McDonald Gill, Guy's Hospital; Herbert Henry Horden, University College; Sydney Harold Jones, St. Thomas's Hospital; Robert Ellis Lord, B.Sc., Owens College and Manchester Royal Infirmary; Edwin Stephen Pasmore, University College; Ernest Noel Reichardt, St. Bartholomew's Hospital.

Second Division.—Marmaduke Bannister, Owens College and Manchester Royal Infirmary; Henry John Blackler, Guy's Hospital; Lewis Thomas Fraser Bryett, King's College; Solomon Bueno de Mesquita, Guy's Hospital; Arthur Holdsworth Davis and Alfred Cromwell Frames, St. Bartholomew's Hospital; Leonard Erskine Hill and Thomas Walter Hinds, University College; Kenneth McLaren, St. Bartholomew's Hospital; Ernest A. Sadler, Queen's College, Birmingham; George Shaw, Westminster Hospital.

ROYAL COLLEGE OF SURGEONS AND APOTHECARIES' HALL IN IRELAND (CONJOINT SCHEME).—The following gentlemen have obtained the licences of both corporations:—

William Frank Bruce, James Arthur Campbell, Charles Casey, John Robt. Hill, Edwd. Gourley Lumsden, Mathew Joseph McDonough, Thomas Brice Morris, Hubert Satchwell, Thomas Shanahan, Henry Joseph Twamley, Claude Ambrose Truman, and Vincent Leonard Watts.

ASSOCIATION OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—In announcing last week the approaching general meeting of this Association, we appended a list of officers, which has since been subjected to some modification. We therefore give the list in its amended form:—President: Mr. G. D. Pollock (London). Vice-Presidents: Mr. Timothy Holmes and Mr. Walter Rivington (London). Treasurer: Mr. John Tweedy (London). Honorary Secretary: Mr. Herbert Wm. Allingham (London). Committee: Mr. Wm Adams (London), Mr. W. Allingham (London), Dr. Robert Barnes (London), Mr. W. K. Barnes (London), Mr. E. R. Bickersteth (Liverpool), Mr. W. Bruce Clarke (London), Dr. W. J. Collins (London), Dr. Ward Cousins (Portsmouth), Mr. J. Couper (London), Mr. W. T. Crosse (Norwich), Mr. Richard Davy (London), Mr. Alban Doran (London), Mr. Victor Horsley (London), Mr. Jordan Lloyd (Birmingham), Mr. J. H. Morgan (London), Mr. A. T. Norton (London), Mr. Mayo Robson (Leeds), Mr. Manley Sims (London), Mr. C. Steele (Bristol), Mr. W. J. Square (Plymouth), and Mr. Lawson Tait (Birmingham).

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the meeting of the Faculty held on the 2nd inst., Mr. Joseph Peake, L.F.P.S.G., having passed the necessary examination, was admitted a Fellow.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—In the list published on the 24th ult., of gentlemen who passed the first professional examination for the Fellowship, for "William Ernest Milles" read William Ernest Miles.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following office-bearers have been elected for the ensuing year:—President: Henry Gray Croly. Vice-President: William Carte. Secretary: William Colles. Council: Wm. Colles, Sir Geo. Porter, Bart., G. Kidd, Rawdon Macnamara, Edward Hamilton, J. K. Barton, Philip Crampton Smyly, Edward H. Bennett, Anthony Corley, H. Rosborough Swanzy, W. J. Wheeler, William Thomson, Sir Charles Cameron, R. Theodore Stack, Kendal Franks, Charles B. Ball, J. B. Story, Henry Fitzgibbon, Richard F. Tobin.

ESSEX AND COLCHESTER HOSPITAL.—Mr. Horace G. Egerton Green, the chairman of the committee, has generously, at his own expense, had the iron house (which was presented by him in 1879 for the reception of patients during the alterations and additions then made to the hospital) put into thorough repair. This house is at present utilised for patients during the necessary annual cleaning of the wards, but it is stated that it may be available as a convalescent ward to the hospital, detached as it is in the garden, with an abundance of fresh air.

THE CYPRUS SOCIETY.—A drawing-room meeting in aid of this Society was held on Monday at Lord Brassey's residence in Park-lane, the Princess Christian presiding. The Society has been founded for hospital and educational work, as well as to promote the physical and moral welfare of the people in Cyprus. Funds have been established, to which subscriptions are solicited—namely, general, hospital, and educational. The objects at present in view are the erection of a Gordon Memorial Cottage Hospital at Kyrenia, the appointment of two lady nurses to go out to Nicosia, and of two English clergymen for the same place for educational work. A resolution was adopted for the promotion of these proposed schemes.

KENSAL GREEN.—On Monday, May 26th, the new recreation grounds, which adjoin the railway station, and comprise upwards of thirty acres of land, were formally opened. It is proposed to charge a membership fee of one guinea per annum, and it is anticipated that a large number of persons engaged in the City will avail themselves of the advantages which grounds of this character afford for all forms of physical recreation. The grounds, which are the property of Silas College, Oxford, are rented by a company, of which Dr. Sidney Lees is the chairman, at an annual rental of £700; and we understand that any surplus received for fees, after defraying expenses, will be given away in prizes, for which members only will be allowed to compete, and which will, no doubt, prove an additional inducement to those who may avail themselves of the many advantages offered to members.

TOWN GARDENING.—An experiment in street gardening is being made by the Manchester Field Naturalists' Society. Having obtained the permission of the corporation and infirmary authorities, the Society have placed a series of large boxes upon the esplanade in front of the infirmary, which has hitherto been a dreary waste of stone flags. Some years ago a large pond or basin of water extended along here, but the difficulty in keeping it clean and free from litter and débris led to its abolition. Taking example from Paris, an attempt is to be made to enliven various parts of the town with hardy shrubs and plants, which can be removed in the winter or taken away for a change of air when the inevitable effects of our smoke-laden atmosphere shall have been produced. The plants now selected are a hardy species of holly, and they form at present a considerable ornament to the large open space in Piccadilly.

WE understand that the Transactions of the Paris Congress of Dermatology will be published on June 10th by M. Masson, Boulevard St. Germain, Paris.

OBSTETRICAL SOCIETY OF LONDON.—The library of this Society, 20, Hanover-square, W., will be again open to the Fellows on Monday next, the 9th inst.

DONATIONS AND BEQUESTS.—Lord Ardilaun has given £50 to the City of Dublin Hospital. Miss Jane O'Brien has bequeathed £40 to the same institution; and Miss Helena Daunt £50 to the Protestant Hospital for Incurables, Cork.

INFLUENZA IN AUSTRALIA.—According to the latest advices, a serious outbreak of influenza is prevailing in Australia, necessitating the closing of schools, several hundred children being attacked with the disease. Government officials and crews of ships have also been smitten with it. The crews also of several of Her Majesty's ships in the Australian squadron had been affected by the malady, but which, by the latest reports, was rapidly subsiding.

HOSPITAL FOR CONSUMPTION, BROMPTON.—The annual report for 1889 records the continued uninterrupted extension of the benefits bestowed by the institution. A larger number of sufferers were relieved than in any previous year; 437 patients had been sent to the Samaritan Society's Convalescent Homes at Sandgate and Bournemouth, the entire expenses being defrayed by the hospital. Liberal support is solicited.

PRESENTATIONS.—The members of the Colchester Medical Society and other friends have presented Mr. W. I. Mason, J.P., M.R.C.S., &c., with a handsome testimonial in the form of a model of a Greek temple, with imposing façade, in the centre of which is a clock. A flight of steps leads to the columned portico, and in front on a gold plate is the following inscription:—"Presented to William Inglis Mason, M.R.C.S.E., of Sudbury, Suffolk, by several members of the Colchester Medical Society, and other subscribers, as a memorial of his *esprit de corps* in publicly vindicating his professional honour, and the rights of his profession, in a suit at law, tried at Queen's Bench, London, in December, 1889."—On the 22nd ult. Dr. Charles Templeman, M.B., C.M.Edin., Police Surgeon, Dundee, was presented by the members of the ambulance classes in connexion with the police force with a voltaic battery, in recognition of the painstaking manner in which he had conducted these classes for five years.

DENTAL HOSPITAL OF LONDON. — The annual dinner of the athletic club of this hospital was held on June 1st at the Holborn Restaurant, Mr. Smith-Turner occupying the chair. In proposing the principal toast of the evening the chairman opined that no class of professional men were more in need of out-door sports than those who followed dentistry. They were confined in the same atmosphere all day, their mental and moral attributes were often sorely tried, and not only had they to work with their heads and hands, but also with their feet. He congratulated the hospital upon possessing a glee club as well as an athletic club. Messrs. C. S. Tomes, R. H. Woodhouse, David Hepburn, Morton Smale, Preedy, and Forsyth all made appropriate speeches. Not the least enjoyable part of the evening was the music, in which Messrs. David Hepburn, Wheatley, and Bulle bore conspicuous parts, and Mr. Frank Baine contributed some excellent recitations.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The fourteenth annual meeting of this Association was held on Friday, May 30th, Dr. B. W. Richardson, the president, being in the chair. The report showed that twenty-nine new members and twenty-five new associates (the latter being abstaining medical students) had joined during the year, the total enrolled being 411 members and 130 associates. The report referred to the important investigations on the use of alcohol in workhouses and in hospitals, the former showing that in the all but unanimous opinion of the medical officers it is unnecessary for healthy paupers at any age, and the latter that there is, as a rule, much less used now in hospitals than in 1863. The publication of the endorsement of the medical declarations against alcohol by upwards of 600 medical men was also referred to, and the prize written competition on Alcohol by medical students in London, Edinburgh, Glasgow, and Belfast. The income for the year was £65 9*s.* 6*d.*, and the expenditure £69 11*s.*

SANATORIA.—The Alexandra Hospital (so called by permission of the Princess of Wales), at Woodhall Spa, was formally opened on the 29th ult. by the Countess of Brownlow. The ceremony was attended by a large and distinguished company from all parts of the county. There is accommodation for from twenty to thirty poor patients. It has been erected by public subscription, has cost altogether about £3000, of which £2000 has been obtained. The building will be ready for occupation in July.—The inauguration of the new Marine Baths at Weston took place last week. Three years ago the lady superintendent, Miss Wilson, proposed as a scheme for celebrating the Queen's Jubilee the construction of a complete set of plunge and private marine baths for the use of both sexes. Contracts were taken to the amount of £3112. To meet this outlay £2387 had been obtained up to Dec. 31st last. There are two tepid swimming baths, in addition to four private baths for patients suffering from rheumatism requiring hot sea water.

ASSOCIATION OF PUBLIC SANITARY INSPECTORS.—On Saturday the fifth annual provincial meeting of the Association was held at Leamington. Mr. John Fell (the Mayor) welcomed the members (who represented all parts of the country) at the Town Hall, where the first business of the day took place. Mr. Hugh Alexander presided, in the absence from illness of Sir Edwin Chadwick, president of the Association. He stated that the membership was now close upon 500, and referred to the great work accomplished in the past six years. Sir Douglas Galton read an address by Sir Edwin Chadwick, in which reference was made to the fact that a Minister of Agriculture had been appointed, which should only render them all the more determined to add to the Cabinet a Minister of Health. Other papers of interest were read, and the proceedings terminated. The members then visited the Waterworks, and, after lunching with the Mayor at the Town Hall, drove to the sewerage works, to Warwick Castle, and other places of interest.

MEDICAL NOTES IN PARLIAMENT.

The Lepers in Jamaica.

IN the House of Commons, on Tuesday, June 3rd, Mr. Gourley asked the Under Secretary of State for the Colonies whether he was aware that in the island of Jamaica there was a considerable population of lepers, the number of which was daily increasing in consequence of there being no law compelling them to remain in the hospital until cured; and whether he could see his way to recommend the governor to introduce a law compelling the isolation of people who might be suffering from leprosy.—Baron H. De Worms replied that the Secretary of State was not aware whether the number was increasing. The question of the compulsory isolation of lepers was under the consideration of the governors of Jamaica and other West Indian colonies.

Public Health Acts Amendment Bill.

The House went into Committee on this Bill and agreed to Clause 1. On Clause 2, Mr. Sexton moved that the Bill should be extended to Ireland. The Attorney-General for Ireland said he had no objection to the substance of the Bill, but as it was framed on the English Public Health Acts it would require a carefully prepared clause to extend its operation to Ireland. He would look into the matter, and, if it were possible, frame a series of amendments extending the Bill to Ireland.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on June 3rd, 1890.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	198	22	—	13	..	233	442
North-Western Hospital	96	25	—	6	..	127	415
Western ,,	124	16	—	12	2	154	202
South-Western ,,	95	..	..	..	..	95	350
South-Eastern ,,	165	13	3	21	2	204	462
Northern ,,	368	30	..	7	..	405	584
Totals	1046	106	3	59	4	1218	2515

SMALL-POX.—*Atlas* hospital ship. 5.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARBER, ALEX., M.D. Brussels, L.R.C.S. Irel., has been appointed Government Medical Officer and Vaccinator for the District of Hillgrove, New South Wales.

BURNET, ROBERT WM., M.D., C.M. Aber., M.R.C.P. Lond., has been appointed Physician to the London Life Association, vice Dr. Arthur Julius Pollock, deceased.

CHRISTIE, WM. W., M.B., C.M. Glas., has been appointed Public Vaccinator for the Districts of Woodville and Danevirke, New Zealand.

GOODE, CHAS. F., M.R.C.S., has been appointed Medical Officer for the Northern District of the Parish of Brighton, vice Ross, deceased.

GOWAN, B. CAMPBELL, M.R.C.S., L.R.C.P., L.S.A., has been appointed Medical Officer of Health for the Hendon Rural Sanitary District, vice W. Thompson, resigned.

HAYNES, JAS. R., L.R.C.P. Edin., M.R.C.S., has been appointed Divisional Surgeon for the Chelsea Subdivision of the B Division of Police.

HOWARD, THOS., M.B., C.M. Glas., has been appointed Medical Officer for the Bishop's Castle No. 1, and the Bishop's Castle No. 2, and Lydbury Districts of the Clun Union.

IRELAND, THOMAS, L.R.C.P., L.R.C.S. Edin., L.F.P. & S. Glas., has been appointed Government Medical Officer for British Guiana.

JACKSON, FOX TURNER, M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to Walton Workhouse, Liverpool.

KINGDON, ERNEST C., M.B., C.M. Edin., has been appointed Ophthalmic Surgeon to the Children's Hospital, Nottingham.

KITE, EDWIN W. D., M.B. Dur., M.R.C.S., has been appointed Medical Officer for the Second District of the Wortley Union.

MACANDREW, HERBERT, M.B., C.M. Edin., has been appointed Public Vaccinator for the District of Hokitika, New Zealand.

MOORE, GEO. R., M.R.C.S., has been appointed Medical Officer for the Shire of Yarrawonga, Victoria.

MORRISON, REGINALD H., M.B., C.M. Edin., has been appointed Medical Officer for the Shire of Oakleigh, Victoria.

POTTS, WALTER A. B., M.R.C.S., has been appointed Public Vaccinator for Serviceton, Victoria.

ROUGHTON, WALTER, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the East Barnet Valley District of the Barnet Union.

RUGG, WILLIAM JOHN, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Pontefract Dispensary, vice G. W. Blomfield, L.R.C.P. Lond., M.R.C.S., resigned.

SMITH, ROBT., L.R.C.P., F.R.C.S. Edin., has been appointed Medical Officer for Avenel, Victoria.

THURSFIELD, WM. N., M.D. Edin., M.R.C.S., has been reappointed Medical Officer for the Borough of Montgomery.

WHITE, GEO. B., M.R.C.S., has been appointed an additional Medical Officer to the Children's Hospital, Nottingham.

WOLFENDEN, JAS. J., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Public Vaccinator for St. Arnaud, Victoria.

WOOLLCOMBE, WALTER L., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Surgeon to the South Devon and East Cornwall Hospital, Plymouth

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BRISTOL GENERAL HOSPITAL.—House Surgeon. Salary £120 per annum, with board, lodging, and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C. House Surgeon for not less than six months. Rooms and board.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—Demonstratorship of Anatomy. Honorarium £150 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board and residence and allowance for washing provided, but no salary.

COUNTY AND COUNTY OF THE BOROUGH CARMARTHEN INFIRMARY.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Senior Resident Medical Officer. Salary £280 per annum (with house, rent and taxes free), payable quarterly, with additional fees for Midwifery of 5*s.* 3*d.* in each case. Also £44 per annum allowed for cab hire. (Apply to the Secretary, 58, Abbey-street, Derby.)

DERBYSHIRE GENERAL INFIRMARY.—Assistant House Surgeon for six months. Board and washing. No salary, but a bonus of £10 is given.

HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £60 per annum, with board and lodging. (Apply to the Honorary Secretary, 27, Marlborough-road, Banbury.)

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary £70, with board &c.

LONDON HOSPITAL, Whitechapel-road, E.—Assistant Physician and Assistant Surgeon.

LUTON FRIENDLY SOCIETIES' MEDICAL INSTITUTE.—Resident Medical Officer. Salary commencing at £180, rising £10 per annum up to £220, with residence. (Apply to the Secretary, 12, Grove-road, Luton, Beds.)

MEMORIAL HOSPITAL, Jarrow-on-Tyne.—House Surgeon, to reside and board free in the hospital. A three years' engagement at a progressive salary of £130, £150, and £170 respectively.

MILLAR HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich, S.E.—Junior Resident Medical Officer. Salary £30 per annum, with board, attendance, and washing.

ROYAL FREE HOSPITAL, Gray's-inn-road.—Assistant Surgeon, to have the care of Out-patients only. Also Junior Resident Medical Officer in the hospital for six months. Board and residence are provided.

ROYAL GENERAL DISPENSARY, 25, Bartholomew's-close, E.C.—Resident Medical Officer.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, Strand.—Clinical Assistants.

STOCKPORT INFIRMARY.—House Surgeon. Salary £100 per annum, with board and lodging.

ST. MARY'S HOSPITAL, Paddington, W.—Physician in charge of Out-patients. Appointment is for five years.

WALLASEY DISPENSARY.—House Surgeon, to Visit and Dispense. Salary £80 per annum, with furnished apartments, coal, gas, and attendance. (Apply to the Hon. Secretary, Elm Mount, Penkett-road, Liscard, Cheshire.)

Births, Marriages, and Deaths.

BIRTHS.

BAGE.—On March 23rd, at Achernar, South Yarra, Melbourne, Victoria, the wife of Dr. Charles Bage, of a daughter.

FLEMING.—On May 30th, at Denmark House, Holbrook, Ipswich, the wife of Robert Martin Fleming, L.R.C.P., L.R.C.S., of a son.

HOAR.—On May 30th, at Rocky-hill-terrace, Maidstone, the wife of Charles E. Hoar, M.D., of a son.

TURNER.—On May 31st, at Finsbury-square, the wife of F. Charlewood Turner, M.D., of a son.

MARRIAGES.

CURGENVEN—GRANT.—On June 3rd, at Christ Church, Lancaster-gate, John Sadler Curgenven, M.R.C.S., eldest son of John Brendon Curgenven, of Craven-hill-gardens, Hyde-park, to Ethel Fanny Lavinia, second daughter of Maurice Grant, of Lancaster-gate, Hyde-park.

DINGLEY—WADDY.—On May 29th, at Finsbury-park Wesleyan Chapel, by the Rev. Jas. Crabtree, assisted by the Revs. W. G. Beardmore and J. T. Waddy, Allen Dingley, F.R.C.S., of London, eldest son of Mr. Wm. Dingley, of 277, Camden-road, N., to Emma Louisa (Louie), eldest surviving daughter of Mr. S. D. Waddy, Q.C., M.P., of 1, Gloucester-gate, Regent's-park.

MAYBURY—TAYLOR.—On June 3rd, at St. Andrew's Church, Barnsbury, Horace Mansell Maybury, M.D., of Islington, third son of Dr. Maybury, of Cedar Lodge, Frimley, Surrey, to Florence Ada, only child of the late George Taylor, Esq., of Islington.

MEAD—RIGG.—On June 3rd, at All Saints', Belvedere, Kent, Robert William Mead, Doctor of Medicine, Whitby, Yorkshire, to Alice Mary, only daughter of the late George James Rigg, of Buckhurst-hill, Essex.

DEATHS.

BARTOLOMÉ.—On June 2nd, at Sheffield, Mariano Martin de Bartolomé, M.D. Edin., in his 77th year.

BROUGHAM.—On May 27th, at Culduthel House, Inverness, James Peter Brougham, M.D., Surgeon-Major Bengal Army, late Surgeon to the Presidency General Hospital, Calcutta, and of Stobars Hall, Westmoreland, aged 74.

EDDOWES.—On May 27th, at Highgate, Ralph Eddowes, Surgeon, of West Bromwich, aged 53.

FARNCOMB.—On June 3rd, at Cornwallis-gardens, Hastings, the residence of his son-in-law, Dr. Frith Edward Farncomb, of Ashbrooke Park, Hollington, St. Leonards-on-Sea, aged 63.

HAMMOND.—On May 29th, at Cambridge Villa, Cranleigh, Surrey, Charles Hammond, L.R.C.P. Lond., M.R.C.S., aged 57.

LEWIS.—On May 30th, at No. 1, Regent's-park-terrace, Gloucester-gate, London, James Potter Lewis, M.D., aged 56.

LYON.—On May 28th, at Waukmill, Peterculter, Aberdeenshire, William Lyon, M.R.C.S., aged 80.

NEWMAN.—On May 29th, at Macklin-street, Derby, Dr. Augustus Newman, aged 58.

SKEEL.—On May 28th, at Norfolk-street, Strand, Thomas Skeel, M.R.C.S., L.S.A., in his 75th year.

THOMAS.—On Thursday, May 29th, at his residence, Queen-street, Wellingboro', J. Howell Thomas, L.R.C.P. Lond., M.R.C.S. Eng., Medical Officer to the Rural Sanitary Authority, in the 39th year of his age.

VERNOR.—On May 28th, at Brunswick-square, London, Alexander Geddes Vernor, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glas., youngest son of the late J. A. Vernor, Esq., of Musselburgh, aged 25.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

A WARNING.

THE following incident recalls a form of petty robbery from which medical men in practice have repeatedly suffered, and to which the circumstances of their calling render them peculiarly liable. Last Friday week a man called at the house of a London practitioner and, on being informed that he was not then at home, asked permission to write a note. This done, he took his departure, and he took with him also a silk umbrella belonging to the master of the house. Fortunately, the culprit was afterwards apprehended and the stolen property recovered. Such thefts as this, though not uncommon, might usually be prevented with a little forethought. The mere fact of a supposed patient calling on a medical man at other than the ordinary consulting hours, and, without card or other personal reference, asking permission to write a note, should suffice to raise a cautious doubt in the mind of a shrewd domestic. It is a standing rule that in such a case the stranger should be the object of constant and polite attention. To note with equal concern any movable articles in the hall or consulting-room implies no unjust suspiciousness, and is only wise. As a final precaution, let us add that any valuables, as instrument cases and the like, if not in present use, should be kept under lock and key.

G. B. is recommended to consult the monograph of Dr. Fusari, lately contributed to the "Atti" of the Accademia dei Lincei of Rome, entitled "Osservazioni sulle Terminazioni Nervose e sullo Sviluppo delle Capsule Surrenali. It embodies the most recent investigations, of an original kind, into the physiology of the supra-renal capsules.

Sanitarian.—The reports on the public action taken in Glasgow in respect of common lodging-houses in that city were published in THE LANCET for Feb. 8th, 15th, and 22nd last.

TREATMENT OF CHRONIC PHARYNGITIS.

To the Editors of THE LANCET.

SIRS,—I have for several years past been the victim of chronic pharyngitis. Twelve months ago to-day it occurred to me that exposure of the back of the neck was a more efficient trigger area for catching cold than the front was, since a beard worn for six years gave me no immunity from repeated acute attacks of pharyngitis supervening on the chronic throat. At the risk of ridicule from friends, I procured collars of a height quite beyond the fashion, and reaching well up to the occiput behind. I enjoyed absolute immunity from fresh attacks of catarrh for six months, when, in the depth of winter, I removed my beard. Six more months have gone by and my throat troubles me not. I merely relate my experience, and am not bigoted.

I am, Sirs, yours faithfully,

June 3rd, 1890. A. M.

OXYGEN GAS IN PNEUMONIA.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 24th I notice a letter from Dr. Chambers recommending the use of oxygen gas in pneumonia. Dr. Chambers mentions obtaining the gas by the old and troublesome chemical process, when it is often very impure, and he does not seem aware that oxygen gas can now be obtained perfectly pure and in any amount at about 2*d.* per sixty cubic feet of the gas. A company in Victoria-street, Westminster, have been supplying oxygen gas for some time past compressed in steel cylinders, allowing of its easy transit and application.

I am, Sirs, yours truly,

Winterbourne, May 28th, 1890. REGINALD EAGER, M.D. Lond.

INFLUENZA LITERATURE.

THE results of the influenza epidemic in the production of literary activity and scientific investigations may to some extent be gathered from an enumeration of the following articles and papers, which have recently been published, and to some of which we may have occasion to refer again:—Influenza, eine Geschichtliche und Klinische Studie, von Dr. A. Ch. Kusnezow und Dr. F. L. Herrmann, Charkow (translated by Drozda); Leçons sur la Grippe de l'Hiver, 1889–90, par le Prof. J. Grasset, Montpellier; The Influenza Epidemic of 1889–90, as observed in Dublin, by John William Moore, B.A., M.D. (*Dublin Journ. Med. Science*, April, 1890); Influenza, an Address by W. T. Gairdner, M.D., LL.D. (*Glasgow Med. Journ.*); Bacterial Studies on the Influenza and its Complicating Pneumonia, by T. Mitchell Prudder, M.D. (*Med. Record*, Feb. 15th); Zur Kenntniss der in Greifswald beobachteten Fälle von Influenza (Sonderabdr., aus der *Deutsch. Med. Woch.*, 1890, No. 8); and the following bacteriological and other writings to be found in full or in abstract in the *Centralblatt fur Bakteriologie*, Nos. 21 and 22:—Influenzastudien, von Drs. W. Kruse, Pansini, and Pasquale (from the Zoological Laboratory, Naples); Strümpell (*Munch. Med. Woch.*, 1890, No. 6); Fleischer (ib., No. 9); Dück (ib., No. 6); Ucke (*St. Petersb. Med. Woch.*, 1890, No. 7); Ribbert (*Deutsch. Med. Woch.*, 1890, No. 15); Kowalski (*Wiener Klin. Woch.*, 1890, Nos. 13 and 14); Deligiannis (*Galenos*, 1890, 8); Prior, (*Munch. Med. Woch.*, 1890, Nos. 13–15); Stintzing and Weitmeyer (ib., Nos. 6–8); Krehl (*Deutsch. Med. Woch.*, 1890, No. 6); Finkler (ib., No. 5). Ocular complications: Hirschberger (*Munch. Med. Woch.*, 1890, No. 4); Eversbusch, (ib., No. 6 and 7); Uhthoff (ib. No. 10). Aural: Haug (*Munch. Med. Woch.*, No. 8); Michael (*Deutsch. Med. Woch.*, 1890, No. 6); Zaufal (*Prager Med. Woch.*, 1890, No. 9); Levy (*Berl. Klin. Woch.*, No. 7)—bacteriology; Schneidemühl (*Deutsch. Med. Woch.*, No. 8)—among domestic animals.

B. J. E. W.—A.'s case is very hard. We cannot say what his legal claim would be, and we should not advise his going to law to enforce it. His principal will be more likely to admit the strength of the case if pressed on other grounds.

C. V.—We do not think our correspondent quite understands the position. The cases have yet to be heard and determined by the Council.

N. A. R.—An application to the secretary of the College will no doubt meet with attention.

A Subscriber of Twenty Years has not enclosed his card.

A NEW FEEDING-CUP.

To the Editors of THE LANCET.

SIRS,—The more obvious defects of the ordinary feeding-cup for the use of patients who cannot rise in bed are: The circular form of the mouthpiece, which in cases of great feebleness permits escape of the food past its sides, between the lips, which cannot close completely round it; its unhandiness, either for the patient or for the nurse, whose positions relative to the vessel are too different for the same handles to offer facility to both; and the absence of any graduation by which quantities may be measured for administration or for record.

I write to mention that I have lately seen a cup in which an attempt has been made to remedy these inconveniences. The cup has three handles, one at the back or opposite the spout for the nurse, and two at the sides for the patient to take hold of. The mouthpiece is flattened above and below, so as to be elongated from side to side, and the vessel is graduated up to 8 oz. on the inside. If the mouthpiece had not been rounded at the sides, and if the angle made by the end of the spout with the body of the cup had been such as to require less tilting of the latter to empty it, and the material had been china to diminish its weight, I should have reckoned it nearly perfect. As it is, I think the article is a great improvement on the common form, and as such I would bring it to the notice of my medical brethren. It is supplied by Mr. Whigham, 22, Brook-street, W.

I am, Sirs, your obedient servant,

Hovingham, May 30th, 1890. THOS. M. WATT.

*** A specimen of the feeding-cup mentioned above has been forwarded to us, and we are able to fully endorse the favourable opinion given of it by our correspondent.—ED. L.

QUEEN CHARLOTTE'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—In your issue of May 31st there appears a table of London hospitals, which shows that there were four deaths at this hospital during the year 1889. This is incorrect, as out of the 905 patients who were admitted last year but one died; and, moreover, there was during 1889 a succession of 1272 deliveries with only one death. The table also shows that there were 1091 out-patients' visits during the past year, whereas 1179 out-patients were treated, and received 8253 visits.

I am, Sirs, your obedient servant,

London, June 3rd, 1890. G. OWEN RYAN, Secretary.

LUNACY CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—Prior to May 1st of this year the certificates of all pauper lunatics were filled up by the medical officer of the union in whose district the pauper resided. Since the passing of the new Lunacy Act the borough magistrates have decided that union medical officers shall no longer be called upon to discharge this office, and have appointed, or are endeavouring to appoint, four medical men in the town to perform this function. According to the letter of the Act they seem to be within their rights; but was it ever intended by those who drew up the Bill that union medical officers should be entirely superseded in the matter of filling up certificates for the proper control of lunatics, whilst the penalties attaching to their office regarding lunatics remain unaffected? I enclose for your perusal copies of letters sent by the deputy clerk of the magistrates to two of the medical men who have been asked to act, and should feel much obliged for your opinion on the matter—viz., (1) Have the borough magistrates the powers they now arrogate to themselves? (2) If so, what redress have union medical officers?

I am, Sirs, yours faithfully,

May 22nd, 1890. SCRUTATOR.

*** We have received other letters bearing on this subject, and we shall be glad to ventilate the matter if our correspondents will favour us with their opinions on the two questions stated in the above communication.—ED. L.

B.—We would refer our correspondent to the Report of the Committee of the Clinical Society upon Rheumatic Hyperpyrexia, where he will find ample evidence to prove that the treatment he criticises is often the *only* means of saving life.

Dr. W. J. Collins.—We hold over our correspondent's communication until Dr. Bristowe has had time to come to a decision with regard to his reply.

J. B. Jennings.—The latest communication on the subject was published in THE LANCET of Feb. 1st of the present year.

TOXIC ACTION OF SODA SALICYLATE.

To the Editors of THE LANCET.

SIRS,—In my note on the unusual toxic action of the soda salicylate in your last issue I omitted the word "serious." The sentence ought to read—"Any serious heart affection," &c.

I am, Sirs, yours faithfully,

Southport, June 2nd, 1890. G. B. BARRON.

Colchester.—Our correspondent who writes to us on a matter in connexion with this town, whilst requesting that his name should be withheld from publication, does not even furnish a *nom de plume*. Consequently we do not see how our readers could give him the information he desires.

Mr. A. Abdy Collins.—We would refer our correspondent to the Librarian of either the Royal College of Surgeons, or of the Royal Medical and Chirurgical Society.

Alpha.—The use of the title "Doctor" is understood to be restricted to those who hold a university degree.

A Perplexed Parent should consult a qualified medical practitioner. We do not give medical advice.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Manley, New York; The Right Hon. the Lord Mayor; Dr. J. W. Fraser, Glasgow; Mr. Benthall, Southsea; Rev. Dr. Adler, London; Rev. W. C. Tucker, London; Dr. O. Jennings, Paris; Rev. Clement Pike; Dr. G. Lyon, London; Mr. R. Williams, London; Rev. R. Harris, Battersea; Rev. A. Ingleby, Ilford; Dr. Voot, Broadmoor; Messrs. S. Deacon and Co., London; Dr. W. T. Gairdner, Glasgow; Messrs. Andrew and Co., Stockport; Rev. C. L. Engstrom, London; Messrs. Orridge and Co., London; Dr. B. W. Richardson, London; Mr. Morgan, West Hartlepool; Dr. Cagney, London; Mr. Shearly, Hastings; Mr. Lawson Tait, Birmingham; Rev. G. Horder, London; Messrs. Hopkinson and Co., Notts; Rev. De K. Williams, London; Messrs. C. Barker and Son, London; Professor Crookshank, London; Messrs. Blondeau et Cie., London; Dr. Seymour Taylor, London; Mr. E. East; Dr. Rayne, Lancaster; Rev. C. Hole, Bromley; Mr. C. Kidd, Bromsgrove; Mr. T. Greenwood; Dr. Carruthers, Edinburgh; Mr. Cochrane, Kirkcowan; Dr. Barton, Norwich; Dr. Wade, Victoria, B.S.; Professor Attfield, London; Dr. Bartley, London; Mr. T. Davies, London; Dr. Collins, London; Dr. J. J. Ridge, Enfield; Dr. H. Snow, London; Dr. Ralfe, London; Dr. Berkart, London; Dr. V. Harley, Strassburg; Dr. R. Savage, London; Dr. Fenton, London; Mr. Piggott, Clare; Mr. T. Cooke, London; Mr. Hornibrook, Bloomsbury; Mr. Branthwaite, Rickmansworth; Dr. Carslaw, Glasgow; Mr. Thorburn, Manchester; Dr. Barron, Southport; Mr. Pocklington, Wimbledon; Mr. Madden, Bristol; Mr. Arnold, London; Mr. Jirram, Godalming; Mr. Gurner, Pall Mall; Mr. Stallard, Worcester; Messrs. Walker and Co., London; Mr. Watt, Hovingham; Dr. Dreschfeld, Southport; Messrs. Riddle and Co., London; Rev. F. F. Kelly, Camberwell; Messrs. Street and Co., London; Dr. A. O. Jones, Harrogate; Messrs. Merryweather and Son, London; Mr. R. A. N. Powys; Mr. A. Collins; Mr. Stanmore Bishop, Manchester; Mr. Barnard, Kirkburton; Messrs. Mitchell and Co., London; Dr. J. A. S. Grant (Bey), Cairo; Dr. Waller, Kirkby Lonsdale; Dr. Bateman, Norwich; Dr. Copeman, London; Dr. R. J. Carter, London; Mr. R. Brown, Glasgow; Rev. T. Stevens, Stratford; Dr. Paramore, London; Mr. Bentley, London; Mr. W. A. Lane, London; Mr. Haddon, London; Mr. Ainley, Halifax; Mr. Whigham, London; Mr. Bode, Bombay; Mr. Leahy, Hyderabad; Mr. C. J. Lee, Liverpool; Mr. H. W. Allingham, London; Dr. Jackson; Mr. J. H. Gough, Devonport; Dr. W. B. Tomson, Luton; Mr. C. E. Jennings, London; Mr. W. H. Bennett, London; Dr. Silles, London; Dr. A. T. Myers, London; Mr. H. A. Reeves, London; Mr. Cohen, Maida-vale; Dr. Althaus, London; Mr. Heim, London; Mr. Heutsch; Dr. Morton, Edinburgh; Mr. Walker, Herefordshire; Dr. Croke, Beverley; Mr. G. Lewie, Austria; Dr. Brockwell, Manchester; Messrs. Robertson and Scott, Edinburgh; Mr. Williams, Carmarthen; Mr. Foster, South Hampstead; Mr. Heap, Cheshire; Mr. Kelly, London; Drs. Evans and Wirtz, London; Mr. Kellett, Halstead; Mr. Darke; Messrs. Mackie and Co., Glasgow; Mr. Neill, Manchester; Mr. Greenwood, Notts; Mr. Taylor, Fermanagh; Mr. Watson, Salisbury; Mr. Davies, Newport; Mr. Neill, Haslingden; Mr. W. I. Mason, Sudbury; Secretary, General Infirmary, Derby; C. A. P. T., Addiscombe; Secretary, The Hospital, Jarrow-on-Tyne; Zeta, London; D. B., London; *Surrey Gazette*, Redhill; Volo, London; Algiers, London; Hon. Sec., Stockport Infirmary; Oxonian, London; F. A. R., London; Manager, Hotel Dore, Bournemouth; R. I. W.; M.R.C.S.; C. V.; M.D., Edin. Univ.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Fraser, Notts; Dr. Maunix, Uttoxeter; Mr. Tully, Hastings; Messrs. A. and M. Zimmerman, London; Mr. Purland, Woolwich; Messrs. Condy and Mitchell, London; Mr. Kempe, Birmingham; Messrs. Burgoyne and Co., London; Mr. Tyte, Minchinhampton; Messrs. Reynolds and Branson, Leeds; Mr. Nugent, Wallingford; Mr. Collier, Tunbridge Wells; Mr. Jones, Llangollen; Mr. Libby, Redhill; Messrs. Carnrick and Co., London; Mr. Norton, Staplehurst; Messrs. Reicherter and Co., Algiers; Dr. Churton, Leeds; Mr. Thin, Edinburgh; Mr. Van Praagh, London; Mr. Sankey, Wellingborough; Messrs. Hazell and Co., London; Mr. Cripps, Dover; Dr. Bolton, Belfast; Mr. Fairfax, Banbury; Mr. Fox, Edinburgh; Dr. Wilson, Redbourne; Mrs. Davies, Kensington; Miss Eyre, Peckham; Mr. Hovell, London; Dr. Lyon, Fencehouses; Mr. Corbishley, Macclesfield; Mr. David, Rhondda Valley; Mr. Taylor, Guildford; Mr. May, Staffs; Messrs. Hooper and Co., Pall Mall; Dr. Renton, Knaresboro'; Mr. Wright, Manchester; Mr. Soper, Dartmouth; Dr. Culbard, Dunkeld; Mr. Soote, Edinburgh; Dr. More, Northampton; Mr. Hay, Hull; Dr. Larking, Chesham; Mr. Ryan, Marylebone; Mr. Wilks, London; Dr. Waller, Peterboro'; Mr. Allen, Derby; Mr. Winckworth, Beds; Mr. Cochrane, Wigton; Mr. Keens, Luton; Miss Thompson, Dublin; Miss Carson, Burton-on-Trent; Mr. Williams, Pontypridd; Mr. Bennett, Birmingham; Mr. Rees, South Wales; Mr. Dunkerley, Lancs; Mrs. Blasson, Lincoln; Mr. Bullivant, Derby; Mr. Twyford, Hanley; Dr. Hollis, Salop; Messrs. Wright and Co., Southwark; Dr. Sizer, Brooklyn, N.Y.; Mr. Davids, Bahbury; Secretary, Wrexham Infirmary and Dispensary; Surgeon, Bradford; Secretary, Brighton and Hove Lying-in Hospital; Interne, London; W., London; Secretary, Bury Dispensary Hospital; Delta, Newcastle; Secretary, Great Yarmouth Hospital; A. T., Notts; Terry, Pulborough; Maltine Manufacturing Co., London; Bonum, London; Omega, London; Experience; North Staffs Infirmary; E. B., London; Alpha, Bedford; P. W. O.; Bona Fide, London; Nemo, London; H., London; Secretary, Fisherton Asylum, Salisbury; Doctor, Notting-hill; Custos, London; Cottage Hospital, London; X., London; Medicus, Hants; S. & D.; Genuine Bargain, London; Tomlinson, London; C. M. B., London; Sanitas Co., London; A. B. C., London; Tenax, London; Matron, Royal South Hants Infirmary; T. E. W., London; Medicus, Oldham; Woolpack, Holborn; D. J. F., London; F.R.C.S., Edinburgh; J., London.

NEWSPAPERS.—*Freeman's Journal, Manchester Guardian, Argus, City Press, Liverpool Mercury, Western Daily Press, Newcastle Evening Chronicle, Kilkenny Journal, Leeds Mercury, Sunday Times, Architect, Sheffield Daily Telegraph, West Middlesex Standard, Nursing Record, Bristol Mercury, Liverpool Daily Post, Broad Arrow, Weekly Free Press and Aberdeen Herald, Law Journal, Reading Mercury, Chemist and Druggist, Builder, Metropolitan, Hertfordshire Mercury, Windsor and Eton Express, Spectator, Local Government Chronicle, Mining Journal, Liverpool Courier, Indian Medical Gazette, Salford Reporter, English Mechanic, Notts Express, Princess, Public Opinion, Sussex Daily News, West Middlesex Advertiser, Western Daily Press, Surrey Advertiser, Globe, Court Circular, Northern Echo (Darlington), Mark Lane Express, Sheffield Independent, West Cumberland Times, Timber Trade Journal, South Wales Daily News, Dundee Advertiser, Bristol Times and Mirror, Glasgow Evening News, Tocsin Woman's Suffrage Journal, Agricultural Economist, Birmingham Leader, &c.*, have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewardt's Instruments.)

THE LANCET Office, June 5th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 30	29·95	W.	54	52	105	66	52	·07	Raining
,, 31	30·16	N.W.	51	44	102	61	42	·02	Cloudy
June 1	30·11	W.	55	48	112	68	44	..	Cloudy
,, 2	29·93	W.	60	56	103	69	53	..	Cloudy
,, 3	29·99	W.	58	52	96	64	52	..	Cloudy
,, 4	29·86	W.	58	55	71	60	55	·37	Raining
,, 5	29·97	S.W.	58	56	101	65	55	..	Overcast

Medical Diary for the ensuing Week.

Monday, June 9.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. Marcus Gunn: External Diseases of the Eye.—Hospital for Sick Children, Gt. Ormond-st.: 4 P.M., Dr. Lubbock: Wasting in Children.

ST. PETER'S HOSPITAL FOR STONE, &c.—4 P.M. Mr. Reginald Harrison: The Operative Treatment of Advanced Forms of Prostatic Obstruction.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. Walter Pye: The Growth Rates of the Body, and especially of the Limbs, in their relation to the Natural and Surgical Processes for Rectification of Deformity.

Tuesday, June 10.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. R. Percy Smith: General Paralysis of the Insane.—Hospital for Diseases of Skin, Blackfriars: 4 P.M., Mr. Jonathan Hutchinson: Parasitic Affections of the Skin.

ROYAL INSTITUTION.—3 P.M. Mr. Andrew Lang: The Natural History of Society.

ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Ferrier: Cerebral Localisation. (Croonian Lecture.)

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8.30 P.M. Mr. Theodore Bent: The Nomad Tribes of Asia Minor.—Mr. Bernard Hollander: A Contribution to a Scientific Phrenology.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Sir William Roberts: A contribution to the Chemistry of Gout.—Mr. Clinton T. Dent and Mr. W. C. Bull: Analysis of 400 cases of Amputation, with Special Reference to the Causes of Diminution of Mortality.

Wednesday, June 11.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Acland: The Elements of Prognosis in Tubercular Disease of the Lungs.—Royal London Ophthalmic Hospital: 8 P.M., Mr. A. Quarry Silcock: Ophthalmoscopic Cases.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. Walter Pye: The Growth Rates of the Body, and especially of the Limbs, in their relation to the Natural and Surgical Processes for Rectification of Deformity.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Mr. Bowreman Jessett: Some Points in the Surgery of the Intestines. Council at 8 P.M.

Thursday, June 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Mr. Wm. Adams: The Surgery of Deformities due to Paralysis.—New Infirmary, Paddington: 4 P.M., Dr. Broadbent: Clinical Lecture on Medical Cases. 5 P.M., Dr. Savill: Post-mortem Examinations.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Flame and Explosives.

ZOOLOGICAL SOCIETY OF LONDON (Lecture Room, Society's Gardens, Regent's-park).—5.30 P.M. Mr. F. E. Beddard: The Colours of Animals. (Davis Lecture.)

SOCIETY OF ARTS.—5 P.M. Sir Theodore C. Hope: The Rationale of Indian Railways.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M. Exhibition of Portrait of the late Prof. Donders by Sir Wm. Bowman, Bart. Mr. K. Scott: (1) Double Cataract (card); (2) Iritis (card).—Dr. J. Collins: Persistent Capsulo-Pupillary Membrane (card).—Mr. Gunn (for Dr. Werner): Vascular Abnormality (card).—Mr. Stanford Morton: Tumour of Plica Semilunaris (card).—Mr. Lawford: Retinal Embolism (card). Papers:—Mr. McHardy: On Artificial Maturation of Cataract (concluded).—Mr. Snell: On Artificial Ripening of Cataract.—Dr. Bronner: Concussion of the Eyeball.—Dr. Sharkey: On Graefe's Sign. Discussion on Artificial Ripening of Cataract by Messrs. Critchett, Browne, Tweedy, Berry, Mackinlay, Cowell, Hill Griffiths, Brailey, and Priestley Smith.

Friday, June 13.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. R. Percy Smith: Clinical Demonstration.—Hospital for Consumption, Brompton: 4 P.M., Dr. Acland: The Pathology, Diagnosis, and Treatment of Hæmoptysis.

LONDON HOSPITAL MEDICAL COLLEGE.—4 P.M. Mr. Jonathan Hutchinson: Stone in the Bladder.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. Walter Pye: The Growth Rates of the Body, and especially of the Limbs, in their relation to the Natural and Surgical Processes for Rectification of Deformity.

ROYAL INSTITUTION.—9 P.M. Prof. S. P. Thompson: The Physical Foundation of Music.

Saturday, June 14.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

ROYAL INSTITUTION.—3 P.M. Rev. S. Baring-Gould: The Ballad Music of the West of England. (With Musical Illustrations.)

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